Schneider

SERVICE MANUAL

Sec. 1: Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA' s

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- Standard Maintenance
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- Disassembly/Assembly of Mechanism
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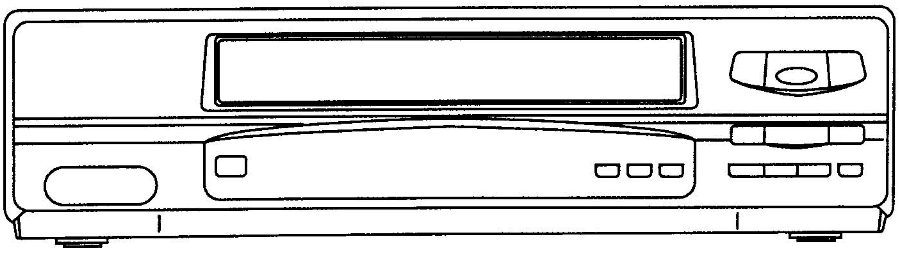
- Alignment Procedures of Mechanism

Sec. 3: Exploded views and Parts List Section

- Exploded views
- Parts List

VIDEO CASSETTE RECORDER

SVC 569



VHS

PAL

MAIN SECTION

VIDEO CASSETTE RECORDER

SVC 569

Sec. 1: Main Section

- **Specifications**
- **Preparation for Servicing**
- **Adjustment Procedures**
- **Schematic Diagrams**
- **CBA' s**

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SPECIFICATIONS

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (R/P) (SP)	Vp-p	0.8	1.0	1.2	
1-2. Video S/N Y (R/P) (SP) INPUT:50% WHITE W/O BURST	dB	40	45		HPF:1KHz LPF:5MHz SC TRAP ON
1-4. Video Color S/N AM (R/P) (SP) INPUT:100% Color	dB	37	41		HPF:1KHz LPF:500KHz SC TRAP ON
1-5. Video Color S/N PM (R/P) (SP) INPUT:100% Color	dB	30	36		HPF:1KHz LPF:500KHz SC TRAP ON
1-6. Resolution (R/P) (SP)	Line	230	245		
2. Servo					
2-1. Jitter Low (R/P) (SP)	µsec		0.07	0.12	
2-2. Wow & Flutter (R/P) (SP)	%		0.3	0.5	E-30, CCIR, WTD
3. Normal Audio					
3-1. Output (R/P) (SP)	dBV	-11	-8	-3.5	INPUT:1KHz-10dBV
3-2. S/N (R/P) (SP)	dB	36	41		FLAT
3-3. Distortion (R/P) (SP)	%		1.0	4.0	INPUT:-10dBV
3-4. Freq. resp (R/P) (SP) at 200Hz	dB	-7	-4		INPUT:-20dBV
(-20dB ref. 1kHz) at 8kHz	dB	-10	-4		

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.

Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1) Insulation tape
2) PVC tubing
3) Spacers
4) Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector

The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.

Replacement procedure

1) Remove the old connector by cutting the wires at a point close to the connector.

Important: Do not re-use a connector. (Discard it.)

2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

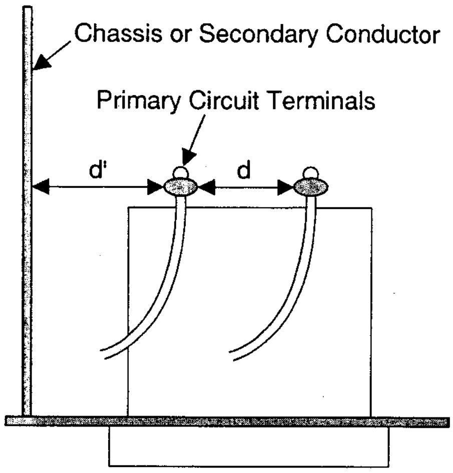


Fig. 1

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d) (d')
230 V	≥ 3mm(d) ≥ 6 mm(d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

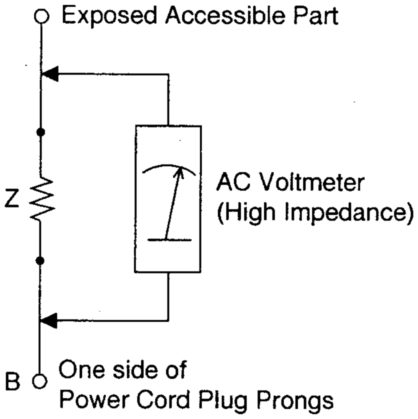


Fig. 2

Table 2 : Leakage current ratings for selected areas

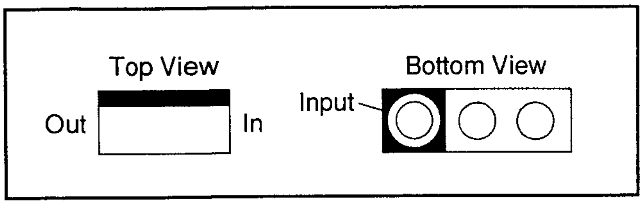
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
230 V	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
	50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

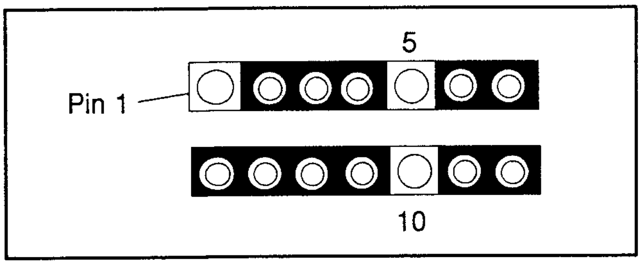
STANDARD NOTES FOR SERVICING

Circuit Board Indications

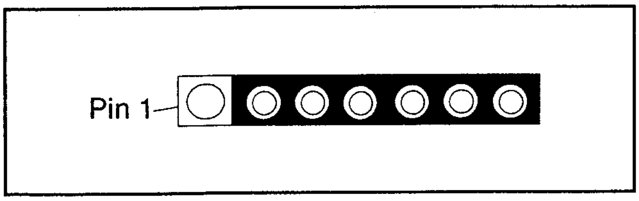
a. The output pin of the 3 pin Regulator ICs is indicated as shown.



b. For other ICs, pin 1 and every fifth pin are indicated as shown.

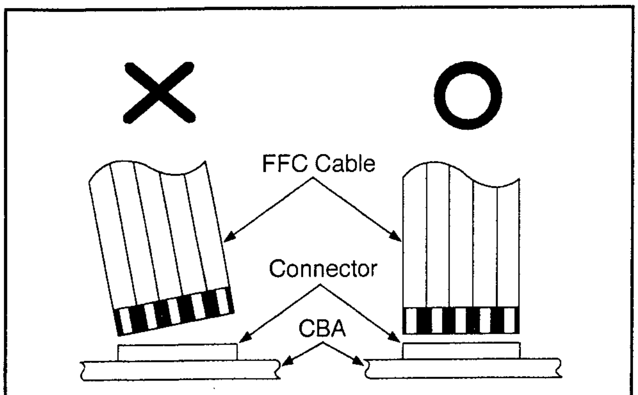


c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



* Be careful to avoid a short circuit.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

(1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

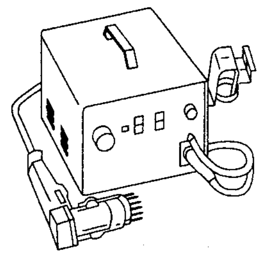


Fig. S-1-1

(2) Remove the flat pack-IC with tweezers while applying the hot air.

(3) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-6)

(4) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-6)

Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder- lands under the IC when removing it.

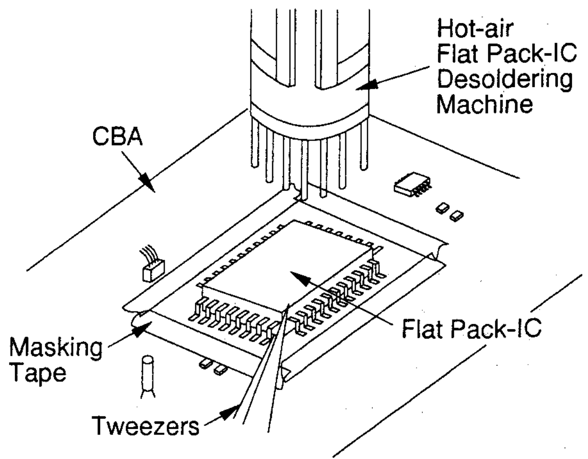


Fig. S-1-2

With Soldering Iron:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

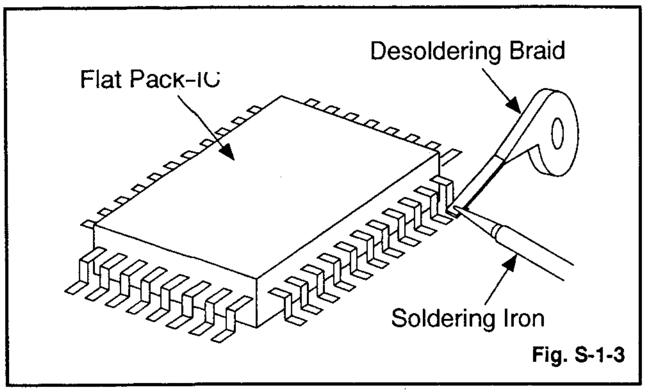

Desoldering Braid
Flat Pack-IC
Soldering Iron

Fig. S-1-3

(2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

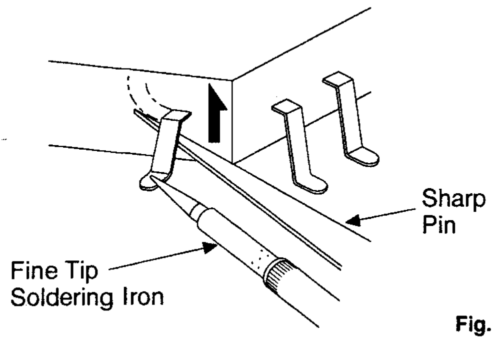

Sharp Pin
Fine Tip Soldering Iron

Fig. S-1-4

(3) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-8)

(4) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-6)

With Iron Wire:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

(2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

(3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig.S-1-5.

(4) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-6)

(5) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-6)

Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

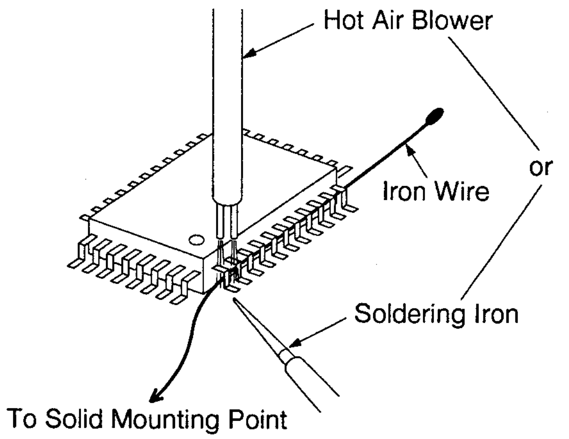

Hot Air Blower
or
Iron Wire
Soldering Iron
To Solid Mounting Point

Fig. S-1-5

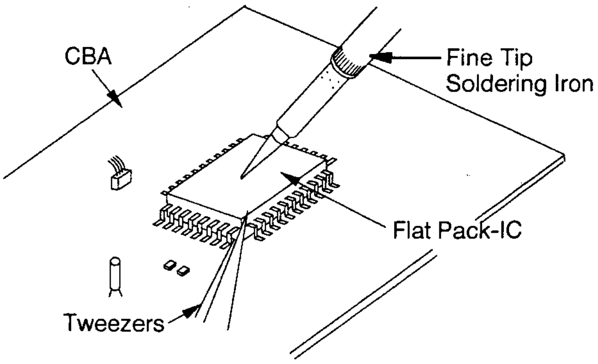

CBA
Fine Tip Soldering Iron
Flat Pack-IC
Tweezers

Fig. S-1-6

2. Installation

(1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.

(2) The " ● " mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then pre- solder the four corners of the flat pack-IC. (See Fig. S-1-8.)

(3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

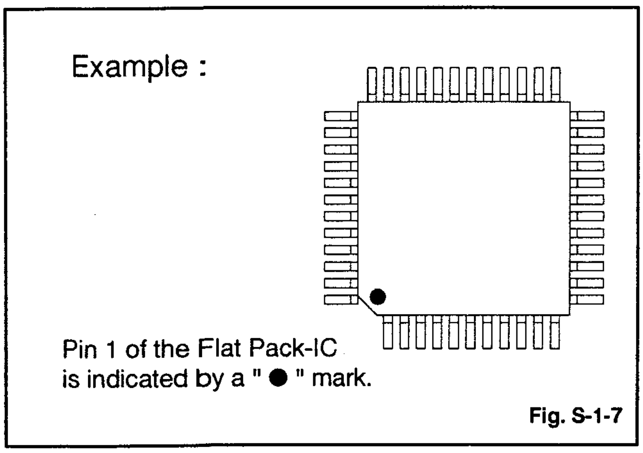

Example :
Pin 1 of the Flat Pack-IC is indicated by a " ● " mark.

Fig. S-1-7

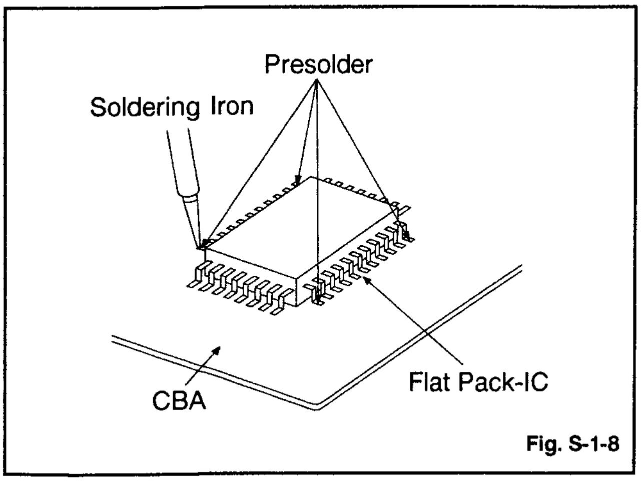

Presolder
Soldering Iron
CBA
Flat Pack-IC

Fig. S-1-8

Instructions for Handling Semiconductors

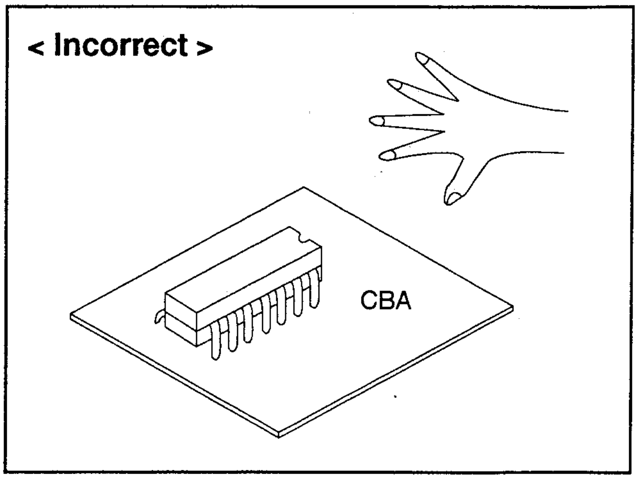
Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

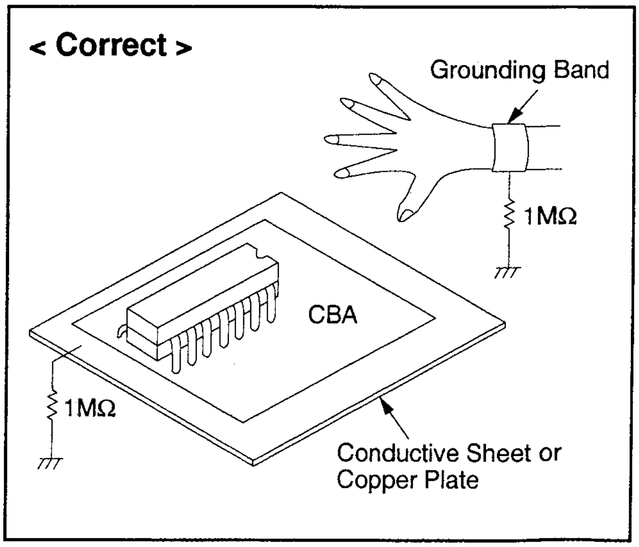
1. Ground for Human Body

Be sure to wear a grounding band (1MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1MΩ) on the workbench or other surface, where the semiconductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semiconductors with your clothing.


< Incorrect >
CBA


< Correct >
Grounding Band
1MΩ
CBA
1MΩ
Conductive Sheet or Copper Plate

PREPARATION FOR SERVICING

How to use Deck Extension Cable

(1) Remove the Deck Mechanism Assembly. If needed, remove the Main CBA from the chassis. Refer to "Disassembly Instructions" on pg. 1-5-1.

(2) Use the Deck Extension Cable to connect the Deck Mechanism Assembly to the Main CBA. (Deck Extension Cable: N1091XA)

Note: Use the connectors grouped as "2H."

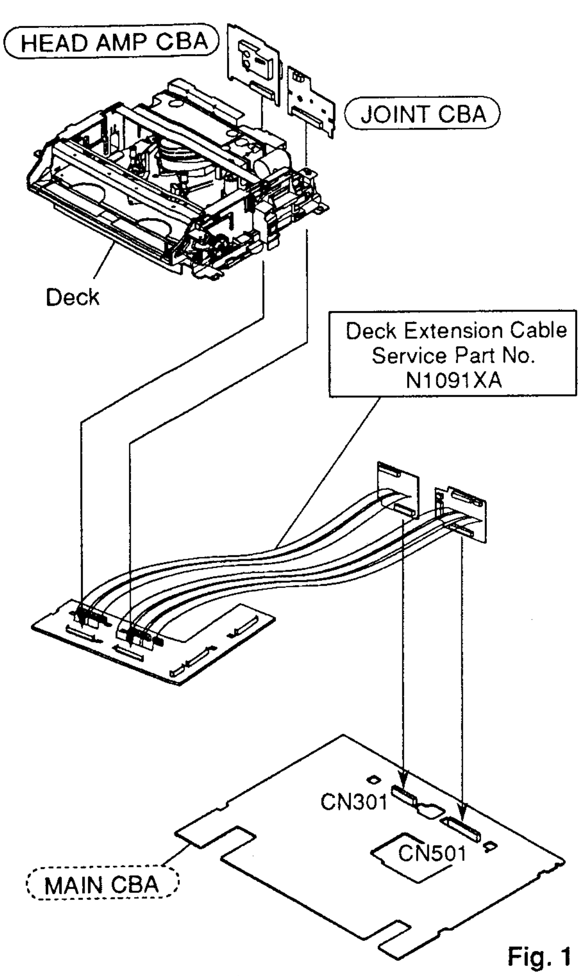

HEAD AMP CBA
JOINT CBA
Deck
Deck Extension Cable
Service Part No.
N1091XA
CN301
CN501
MAIN CBA

Fig. 1

How to Enter the Service Mode

Note: When the unit is set in the service mode, the whole display will keep blinking.

About Optical Sensors

Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

After plugging in the unit, connect TP503 (SENSOR INHIBITION) to TP504 (GROUND). This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.)

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly.

Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

About REC-Safety Switch

Caution:

The REC-Safety Switch is directly mounted on the Main CBA. When the Deck Mechanism Assembly is removed from the Main CBA for servicing, this switch does not work automatically.

What to do for preparation

In order to record, press the Rec button while pushing REC-SAFETY SW on the Main CBA.

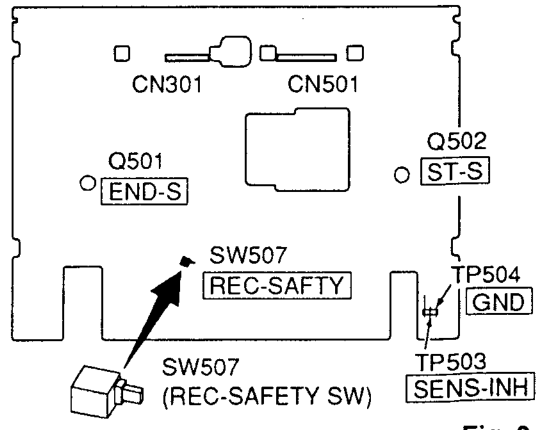
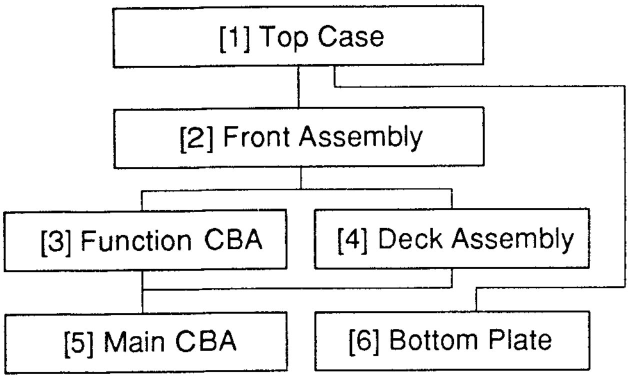

CN301
CN501
Q501
END-S
Q502
ST-S
SW507
REC-SAFTY
TP504
GND
SW507
(REC-SAFETY SW)
TP503
SENS-INH

Fig. 2

DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/ *UNHOOK/UNLOCK/ RELEASE/UNPLUG/ DESOLDER	Note
[1]	Top Case	1	5(S-1)	-
[2]	Front Assembly	2, 3	*7(L-1)	1
[3]	Function CBA	2, 4	*(L-2), (CN502)	2
[4]	Deck Assembly	5	7(S-2), (CN301, CN501)	3
[5]	Main CBA	4, 6, 7	2(S-4), *2(L-3)	4
[6]	Bottom Plate	6	*2(L-4)	5

↓ ① ↓ ② ↓ ③ ↓ ④ ↓ ⑤

①: Identification (location) No. of parts in the figures

②: Name of the part

③: Figure Number for reference

④: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw, CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

⑤: Refer to "Reference Notes".

Reference Notes

CAUTION Locking Tabs (L-1) are fragile. Be careful not to break them.

1. Release 7 Locking Tabs (L-1). To do this, first release three Locking Tabs (A) at the bottom, and then four Locking Tabs (B) at the top. (Fig. 2, 3)
2. Disconnect Connector (CN5501) to remove Function CBA. Hold Main CBA while pulling up Function CBA. (Fig. 4)
3. Remove 7 Screws (S-2) and (S-3). Then slowly lift Deck Assembly up. Lifting Deck Assembly disconnects 2 Connectors (CN2901, CN3501). (Fig. 5)
4. First remove 2 Screws (S-4). Then, releasing 2 Locking Tabs (L-3), lift Main CBA. (Fig. 6, 7)
5. If you are disassembling Bottom Plate before Main CBA, remove 2 Screws (S-4) now. Then slide Bottom Plate in the direction of the big arrow as you press down two Locking Tabs (L-4).

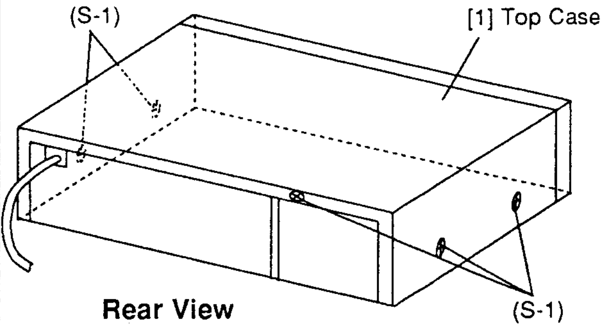


Fig. 1

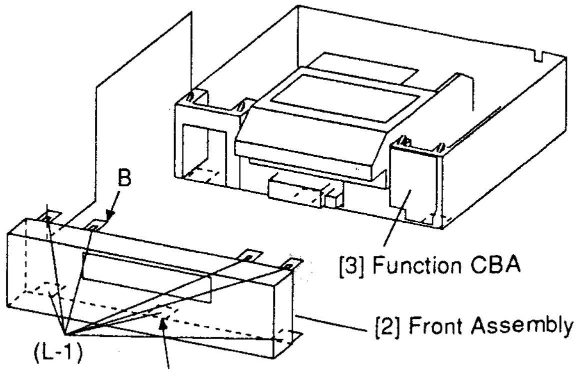


Fig. 2

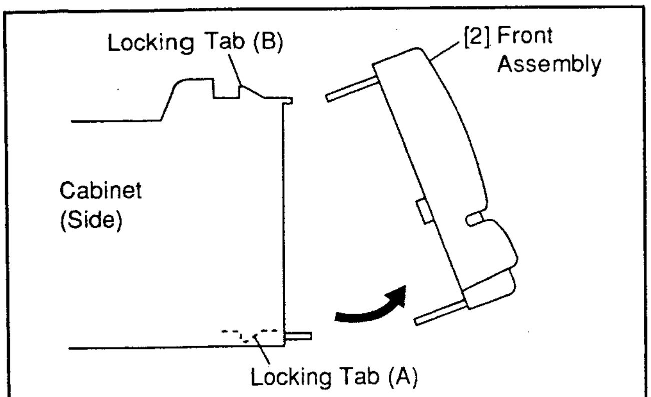
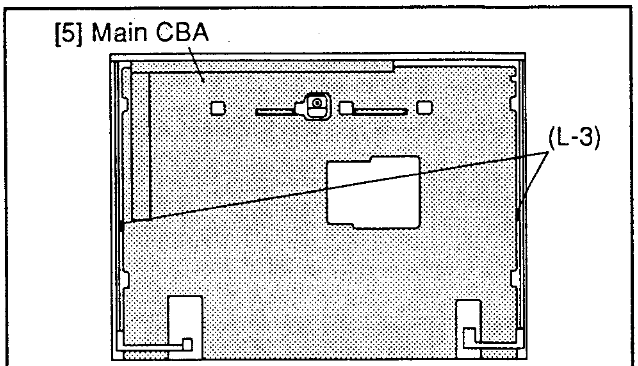

Locking Tab (B)
[2] Front Assembly
Cabinet (Side)
Locking Tab (A)

Fig. 3


[5] Main CBA
(L-3)

Top View

Fig. 7

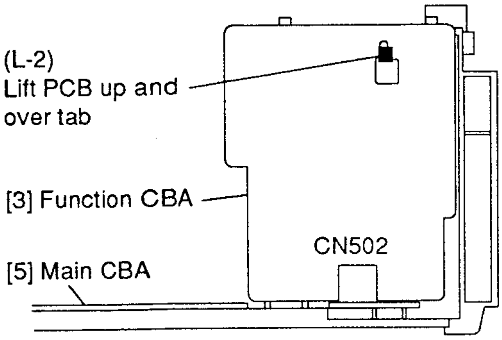
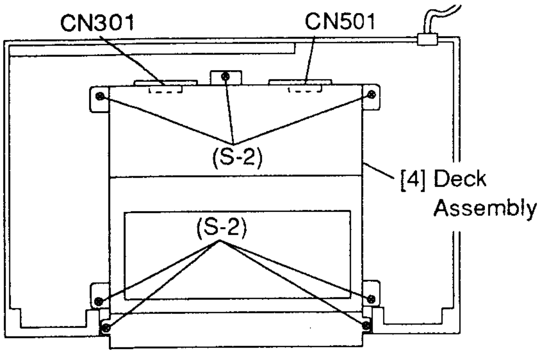
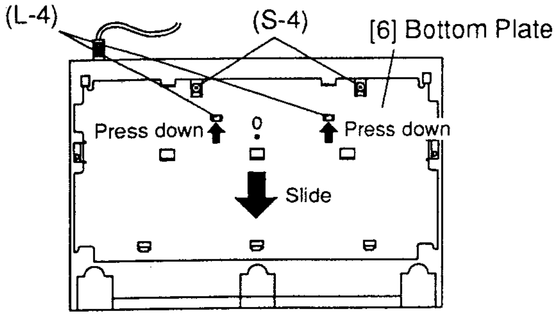

(L-2) Lift PCB up and over tab
[3] Function CBA
CN502
[5] Main CBA

Fig. 4


CN301
CN501
(S-2)
[4] Deck Assembly
(S-2)

Top View

Fig. 5


(L-4)
(S-4)
[6] Bottom Plate
Press down
Press down
Slide

Bottom View

Fig. 6

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is an abbreviation for "Circuit Board Assembly".

Notes:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press both CHANNEL "UP" and "DOWN" buttons at the same time. (VCR' s Front Panel only)

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe, V-Range: 0.001~50V/Div., F-Frange: AC~DC-20MHz
2. PAL Pattern Generator (color bar with 100% white)
3. Alignment Tape (FL6A)
4. Blank Tape (Available Locally)
5. Spectrum Analyzer
6. UP Converter
7. DC Voltmeter
8. TV Modulator
9. Distortion meter

1. Head Switching Position Adjustment

Purpose: To determine the Head Switching point during playback.

Symptom of Misadjustment: May cause Head Switching noise or vertical jitter in the picture.

Test Point	Adj. Point	Mode	Input
TP7501(V-OUT) TP502(RF-SW) GND	VR501 (Switching Point)	PLAY (SP)	----
Tape	**Measurement Equipment**	**Spec.**	
FL6A	Oscilloscope	6.5H±1H (412.7±60µs)	

Connections of Measurement Equipment

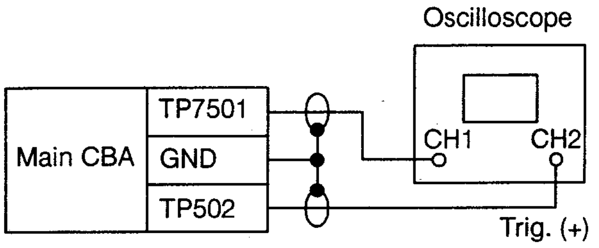
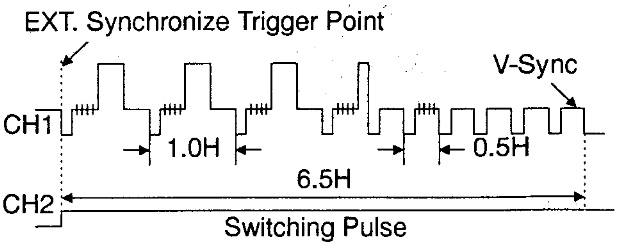


Figure 1



Reference Note:

TP502, TP7501, VR501 : Main CBA

- Play back the test tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H(412.7µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

2. V-Out Level Adjustment

Purpose: To set optimum luminance video out level.

Symptom of Misadjustment: If the video out level is too high, The TV may overload. If the level is too low, The S/N ratio deteriorates.

Test Point	Adj. Point	Mode	Input
TP7501 (V-OUT) GND	VR301 (E-E LEVEL)	E-E	Color Bar Signal with 100% white
Tape	**Measurement Equipment**	**Spec.**	
-----	Pattern Generator Oscilloscope	1±0.1Vp-p	

Connections of Measurement Equipment

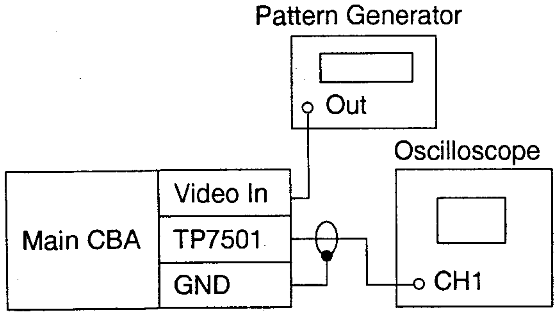
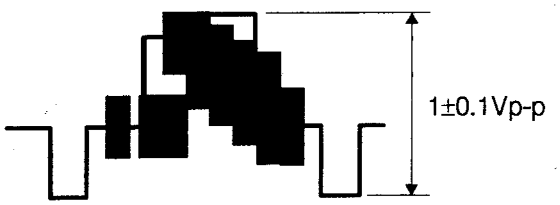

Pattern Generator
Out
Oscilloscope
Main CBA
Video In
TP7501
GND
CH1

Figure 2



Reference Notes:

TP7501, VR301 : Main CBA

1. Input the color bar signal with window 100% white to video input.
2. Adjust VR301 so that the video level becomes 1±0.1Vp-p. (Connected to TV)

3. FM Carrier Adjustment

Purpose: To align FM carrier deviation.

Symptom of Misadjustment: If the deviation is not correct, abnormal contrast of light and dark on the picture may be seen.
If the carrier deviation is not correct, beats appear on the picture.

Test Point	Adjustment Point	Mode	Input
TP301 (Y-REC) TP502 (RF-SW) GND	VR302 (Y-CAR)	REC. (SP)	Color Bar with 100% white
Tape	**Measurement Equipment**	**Spec.**	
Blank Tape	Pattern Generator Spectrum Analyzer Oscilloscope	Sync-tip 3.8±0.1MHz	

Connections of Measurement Equipment

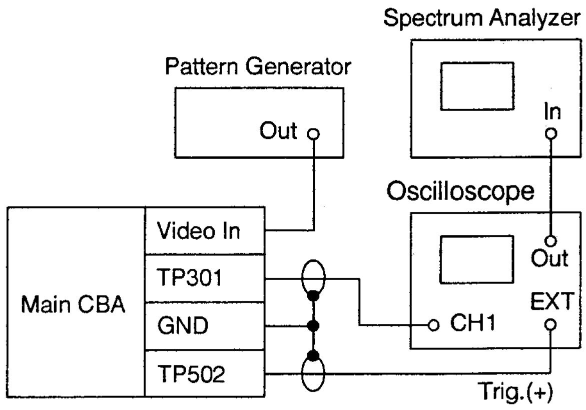
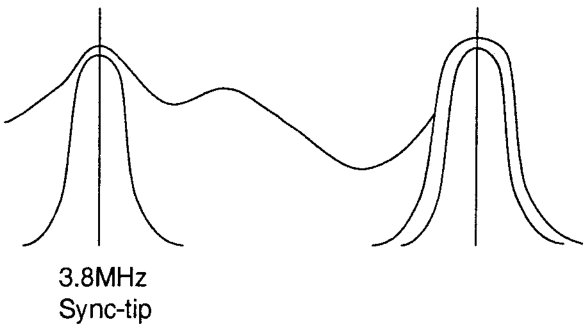

Spectrum Analyzer
Pattern Generator
In
Out
Oscilloscope
Main CBA
Video In
TP301
GND
TP502
Out
EXT
CH1
Trig.(+)

Figure 3


3.8MHz
Sync-tip

Reference Notes:

TP301, TP502, VR302 : Main CBA

1. Input color bar signal with 100% white to video input.
2. Adjust Sync-tip to 3.8MHz± 0.1MHz by VR302.

4. IF Unit Adjustment 1

Note: Remove the IF unit from the Main CBA.

4-1. Adjacent Channel Trap Adjustment 1

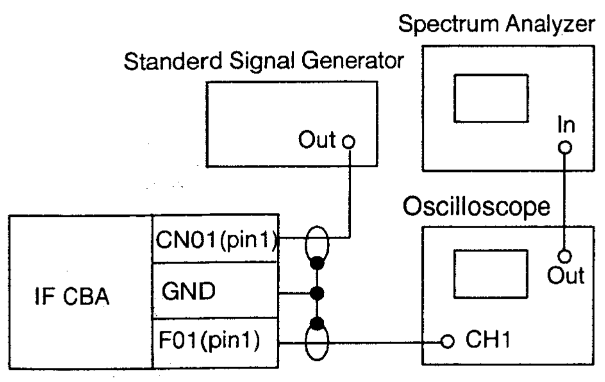
Purpose: To comply IF for local radio wave regulation.

Symptom of Misadjustment: If may cause the noise in picture that audio IF may affect to video IF.
If the frequency of trap overlape on video IF, IC input level WIl be lower and The S/N ratio will be lower.

Test Point	Adj. Point	Mode	Input
Pin1 of CN01 Pin1 of F01 (Saw Filter)	T05 (TRAP)	----	40.4MHz (70dBµV sine wave)

Tape	Measurement Equipment	Spec.
----	Standard Signal Generator Oscilloscope Spectrum Analyzer	----

Connections of Measurement Equipment


Spectrum Analyzer
Standerd Signal Generator
Out
In
Oscilloscope
Out
IF CBA
CN01(pin1)
GND
F01(pin1)
CH1

Reference Notes:

Pin1 of CN01, Pin1 of F01, T05 : IF CBA (IF unit)

1. Input Signal to Pin1 of CN01.
2. Adjust core of Coil T05 so that the waveform level becomes minimum.

4-2. Adjacent Channel Trap Adjustment2

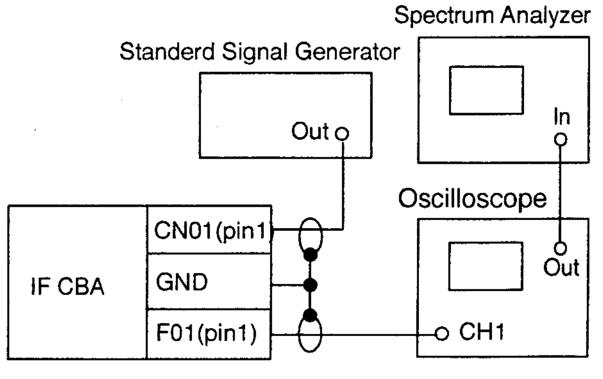
Purpose: To comply IF for local radio wave regulation.

Symptom of Misadjustment: If may cause the noise in picture that audio IF may affect to video IF.
If the frequency of trap overlape on video IF, IC input level WIl be lower and The S/N ratio will be lower.

Test Point	Adj. Point	Mode	Input
Pin1 of CN01 Pin1 of F01 (Saw Filter)	T05 (TRAP)	----	31.9MHz (70dBµV sine wave)

Tape	Measurement Equipment	Spec.
----	Standard Signal Generator Oscilloscope Spectrum Analyzer	----

Connections of Measurement Equipment


Spectrum Analyzer
Standerd Signal Generator
Out
In
Oscilloscope
Out
IF CBA
CN01(pin1)
GND
F01(pin1)
CH1

Reference Notes:

Pin1 of CN01, Pin1 of F01, T06 : IF CBA (IF unit)

1. Input Signal to Pin1 of CN01.
2. Adjust core of Coil T06 so that the waveform level becomes minimum.

5. IF Unit Adjustment 2

Note: Install the IF unit on Main CBA.

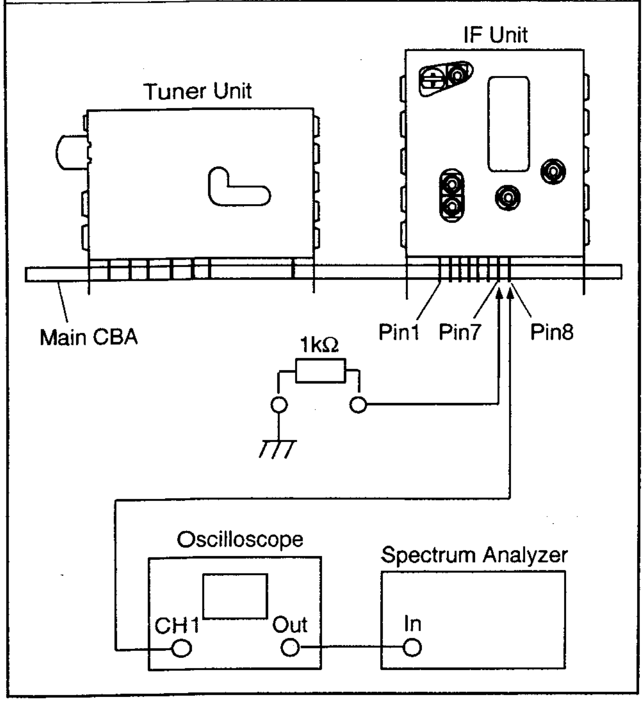
5-1. VCO Adjustment

Purpose: To adjust IF signal to optimum frequency .

Symptom of Misadjustment: Tunning will result unsyncronized

Test Point	Adj. Point	Mode	Input
Pin7 of CN01 Pin8 of CN01	T02 (VCO)	----	----
Tape	**Measurement Equipment**	**Spec.**	
----	Oscilloscope Spectrum Analyzer	-----	

Connections of Measurement Equipment


IF Unit
Tuner Unit
Main CBA
1kΩ
Pin1
Pin7
Pin8
Oscilloscope
CH1
Out
Spectrum Analyzer
In

Reference Notes:

Pin7 of CN01, Pin8 of CN01, T02 : IF CBA (IF Unit)

1. Connect 1kΩ(1/4W) Resistor between Pin7 of CN01 and GND line.
2. Adjust T02 (COIL) so that the VCO of the frequency becomes following value.

   Alignment value= *IF frequency ± 25kHz

   *IF frequency= 38.9MHz

Note: Set the range of Adjust Spectrum Analyzer 2MHz first for rough adjust then set to 50kHz for precise adjustment.

5-2. AFT Adjustment

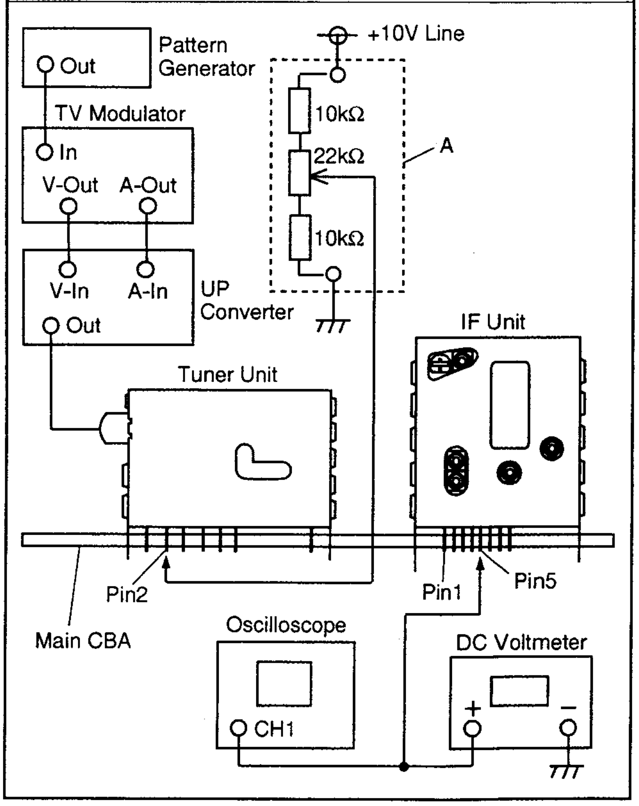
Note: Remove the R710(resistor) from the Main CBA.

Purpose: To adjust AFT effective rang which correct uncyncronized tuning after tuner preset.

Symptom of Misadjustment: May cause uncyncronized tuning after tuner preset.

Test Point	Adj. Point	Mode	Input
Pin5 of CN01 Pin2 of TU701	T03 (AFT)	----	Color Bar with 100% white
Tape	**Measurement Equipment**	**Spec.**	
----	TV modulator UP converter Pattern Generator Oscilloscope DC voltmeter	DC 2.5V±0.3V	

Connections of Measurement Equipment


Pattern Generator
Out
+10V Line
TV Modulator
In
V-Out
A-Out
10kΩ
22kΩ
10kΩ
A
V-In
A-In
Out
UP Converter
IF Unit
Tuner Unit
Pin2
Pin1
Pin5
Main CBA
Oscilloscope
CH1
DC Voltmeter
+
−

Reference Notes:

Pin5 of CN01, T03 : IF CBA (IF Unit)
Pin2 of TU701 : Tuner unit

1. Make the service fixture shown in the above " **A** " .
2. Adjust 22k Ω P.O.T. in the service fixture so that the tuner receives the following frequency.

   *Tuner reception frequency= 203.25MHz
   (VHF H renge, VT= 5~6V)

   *Electric field strength: 70dBμV

   *IF frequency= 38.9MHz

3. Set the tuner in preset made and tuner to the above frequency.
4. Adjust core of Coil T03 so that the AFT voltage becomes DC 2.5V±0.3V.

5-3. Audio distortion Adjustment

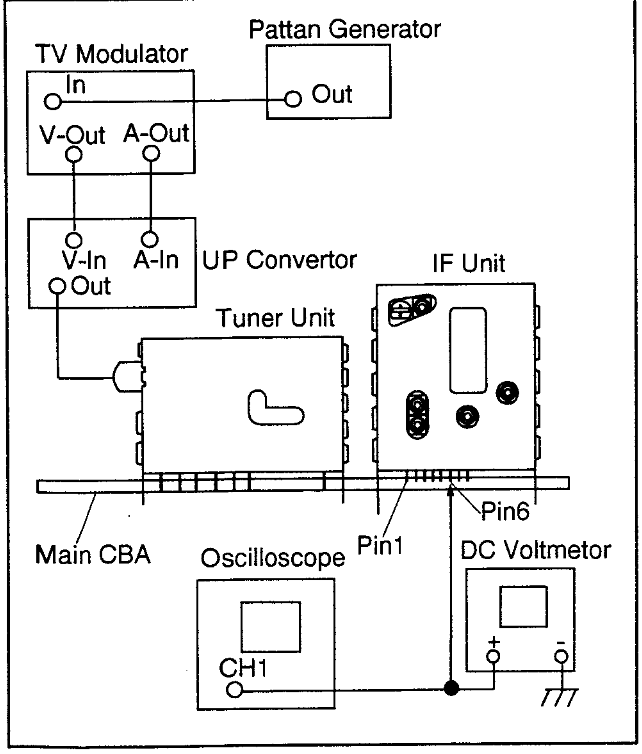
Note: Install the R710(resistor) in Main CBA.

Purpose: To minimize the audio distortion.

Symptom of Misadjustment: May cause audio distortion.

Test Point	Adj. Point	Mode	Input
Pin6 of CN01	T04 (DISTORTION)	----	Color Bar with 100% white
Tape	**Measurement Equipment**	**Spec.**	
----	Pattern Generator UP convertor TV Modulator Oscilloscope Distortion meter	----	

Connections of Measurement Equipment


Pattan Generator
TV Modulator
In
Out
V-Out
A-Out
V-In
A-In
Out
UP Convertor
IF Unit
Tuner Unit
Pin6
Main CBA
Oscilloscope
Pin1
DC Voltmetor
CH1
+
-

Reference Notes:

Pin6 of CN01, T04 : IF CBA (IF unit)

*IF tuner unit of tuner reception condition:

Tuner input = 1kHz (Monaural)

1. Adjust core of Coil T04 so that the audio distortion becomes minimum level.

6. AGC Adjustment

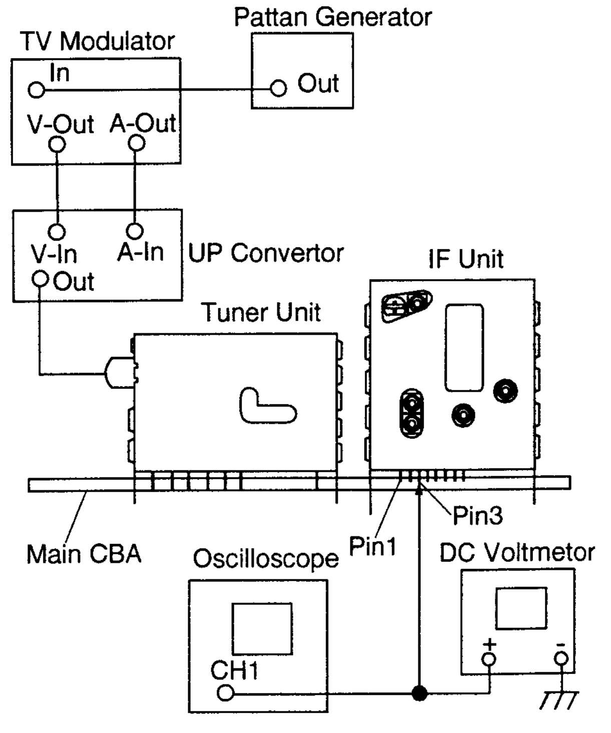
Note: Install the IF unit in Main CBA.

Purpose: To adjust the strength of received air signal.

Symptom of Misadjustment: May cause noise or beat in the picture.

Test Point	Adj. Point	Mode	Input
Pin3 of CN01	VR01 (AGC)	----	Color Bar with 100% white
Tape	**Measurement Equipment**	**Spec.**	
----	Standard Signal Generator Oscilloscope SpectrumAnalyzer DC Voltmeter	----	

Connections of Measurement Equipment


Pattan Generator
TV Modulator
In
Out
V-Out
A-Out
V-In
A-In
Out
UP Convertor
IF Unit
Tuner Unit
Pin3
Main CBA
Oscilloscope
Pin1
DC Voltmetor
CH1
+
-

Reference Notes:

Pin3 of CN01, VR01 : IF CBA (IF unit)

*IF tuner unit of Tuner reception condition:

Tuner input = 1kHz

1. Set the tuner in preset made and tuner to the above frequency.

*Tuner reception frequency=203.25MHz (VHF H renge)

*Electric field strength: 70dBμV

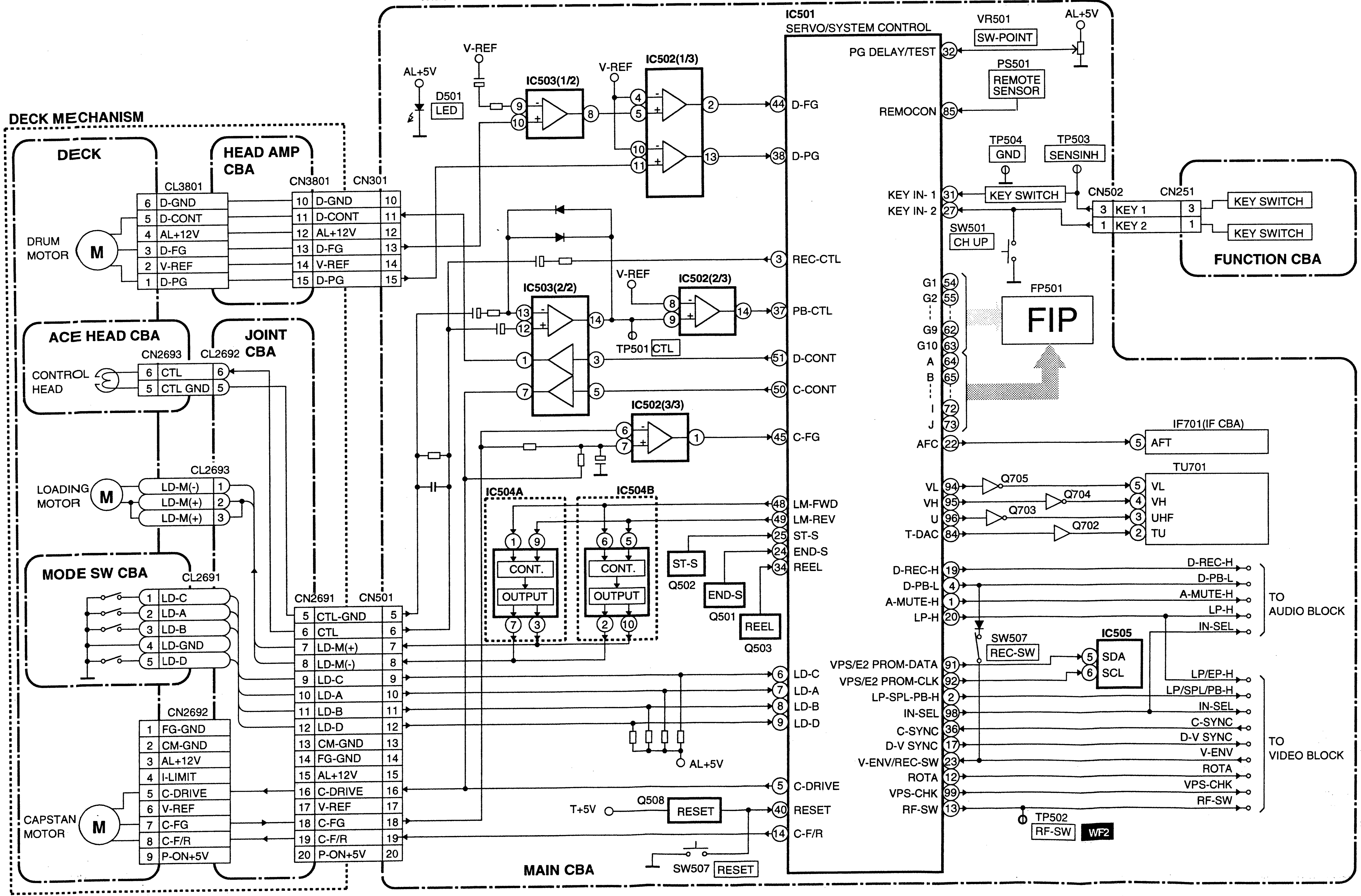
2. Adjust VR01 so that the voltage of AGC becomes the following level.

*DC voltmeter level=DC 4.0V±0.2V

Servo/System Control Block Diagram

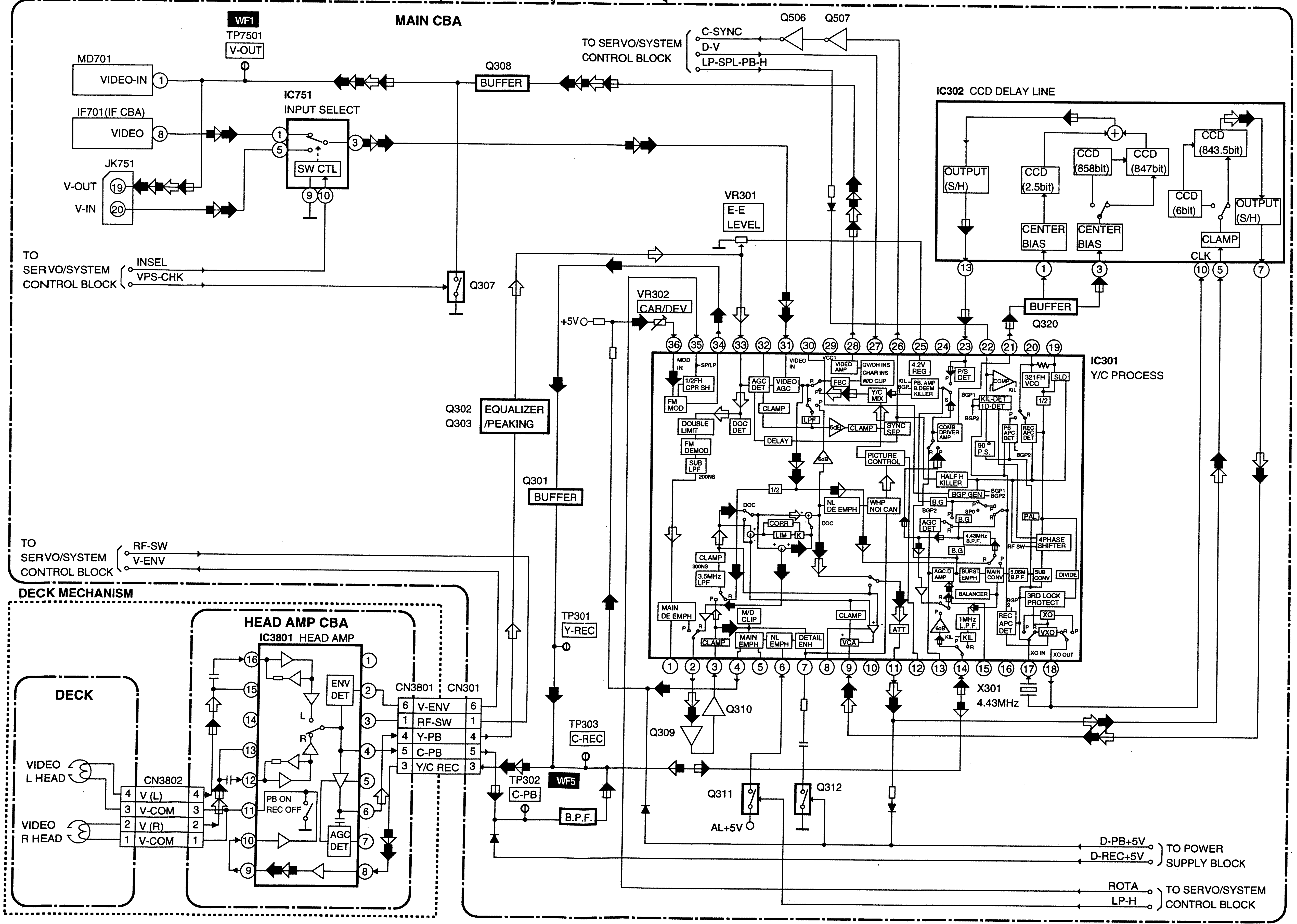
BLOCK DIAGRAMS

NOTE: THE LOADING MOTOR DRIVE IC IS EITHER IC504A(TA7291S) OR IC504B(LB1641).
THESE ICS ARE EXCHANGEABLE PARTS.

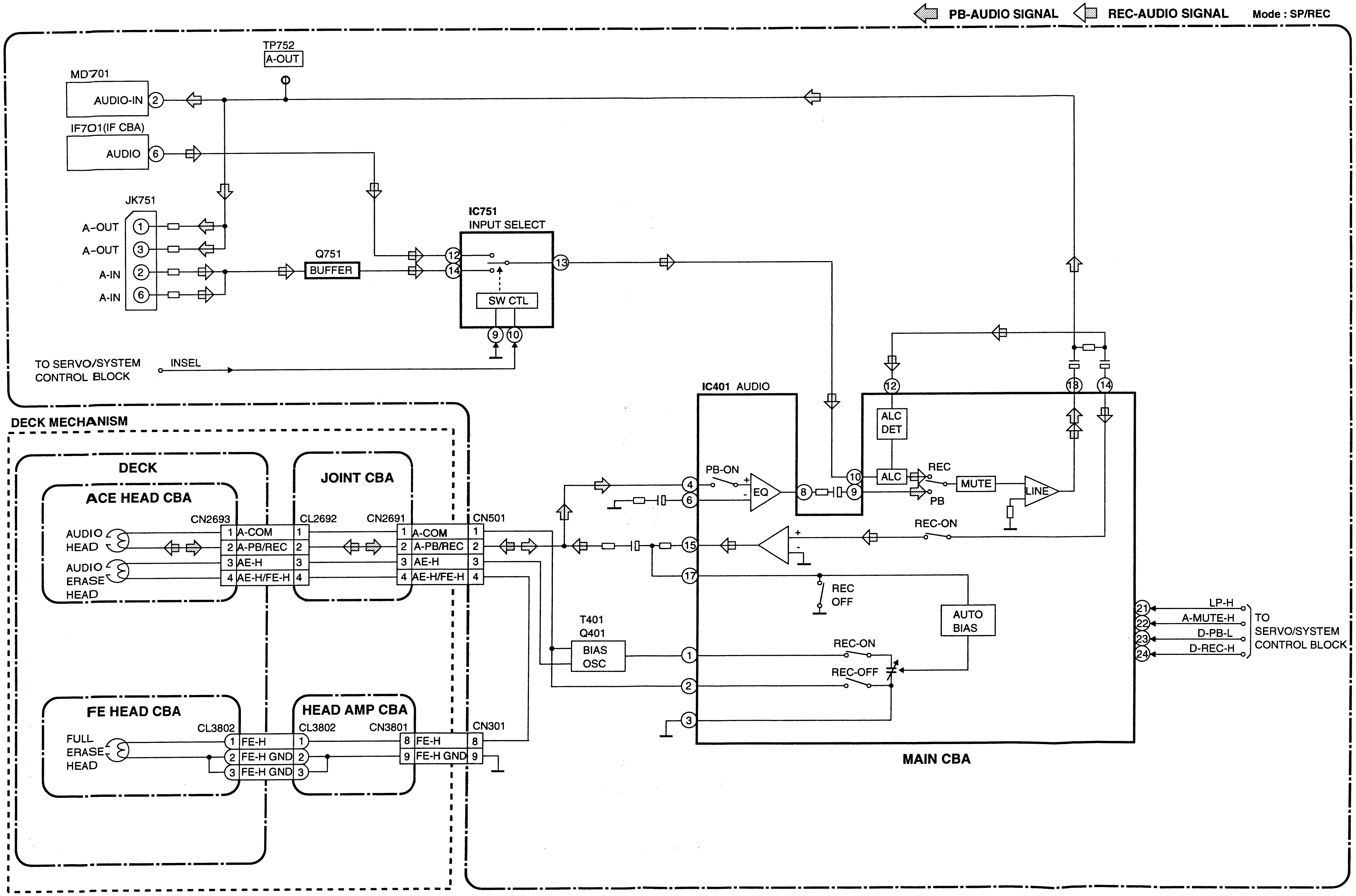

DECK MECHANISM
DECK
HEAD AMP CBA
CL3801
CN3801
CN301
DRUM MOTOR
M
6 D-GND
5 D-CONT
4 AL+12V
3 D-FG
2 V-REF
1 D-PG
10 D-GND 10
11 D-CONT 11
12 AL+12V 12
13 D-FG 13
14 V-REF 14
15 D-PG 15
ACE HEAD CBA
JOINT CBA
CN2693
CL2692
CONTROL HEAD
6 CTL 6
5 CTL GND 5
CL2693
LOADING MOTOR
LD-M(-) 1
LD-M(+) 2
LD-M(+) 3
MODE SW CBA
CL2691
1 LD-C
2 LD-A
3 LD-B
4 LD-GND
5 LD-D
CN2692
CAPSTAN MOTOR
1 FG-GND
2 CM-GND
3 AL+12V
4 I-LIMIT
5 C-DRIVE
6 V-REF
7 C-FG
8 C-F/R
9 P-ON+5V
CN2691
CN501
5 CTL-GND 5
6 CTL 6
7 LD-M(+) 7
8 LD-M(-) 8
9 LD-C 9
10 LD-A 10
11 LD-B 11
12 LD-D 12
13 CM-GND 13
14 FG-GND 14
15 AL+12V 15
16 C-DRIVE 16
17 V-REF 17
18 C-FG 18
19 C-F/R 19
20 P-ON+5V 20
AL+5V
D501
LED
V-REF
IC503(1/2)
IC502(1/3)
IC503(2/2)
IC502(2/3)
IC502(3/3)
TP501 CTL
IC504A
IC504B
CONT.
OUTPUT
ST-S
Q502
END-S
Q501
REEL
Q503
AL+5V
T+5V
Q508
RESET
SW507 RESET
MAIN CBA
IC501
SERVO/SYSTEM CONTROL
PG DELAY/TEST 32
REMOCON 85
44 D-FG
38 D-PG
3 REC-CTL
37 PB-CTL
51 D-CONT
50 C-CONT
45 C-FG
48 LM-FWD
49 LM-REV
25 ST-S
24 END-S
34 REEL
6 LD-C
7 LD-A
8 LD-B
9 LD-D
5 C-DRIVE
40 RESET
14 C-F/R
VR501
SW-POINT
AL+5V
PS501
REMOTE SENSOR
TP504
GND
TP503
SENSINH
KEY IN- 1 31
KEY IN- 2 27
KEY SWITCH
SW501
CH UP
CN502
CN251
3 KEY 1 3
1 KEY 2 1
KEY SWITCH
KEY SWITCH
FUNCTION CBA
G1 54
G2 55
G9 62
G10 63
A 64
B 65
I 72
J 73
FP501
FIP
AFC 22
IF701(IF CBA)
5 AFT
TU701
VL 94
VH 95
U 96
T-DAC 84
Q705
Q704
Q703
Q702
5 VL
4 VH
3 UHF
2 TU
D-REC-H 19
D-PB-L 4
A-MUTE-H 1
LP-H 20
D-REC-H
D-PB-L
A-MUTE-H
LP-H
IN-SEL
TO AUDIO BLOCK
SW507
REC-SW
IC505
5 SDA
6 SCL
VPS/E2 PROM-DATA 91
VPS/E2 PROM-CLK 92
LP-SPL-PB-H 2
IN-SEL 98
C-SYNC 36
D-V SYNC 17
V-ENV/REC-SW 23
ROTA 12
VPS-CHK 99
RF-SW 13
LP/EP-H
LP/SPL/PB-H
IN-SEL
C-SYNC
D-V SYNC
V-ENV
ROTA
VPS-CHK
RF-SW
TO VIDEO BLOCK
TP502
RF-SW
WF2

Video Block Diagram

REC-Y SIGNAL   REC-C SIGNAL   PB-Y SIGNAL   PB-C SIGNAL   Mode : SP/REC


MAIN CBA
WF1
TP7501
V-OUT
MD701
VIDEO-IN
IF701(IF CBA)
VIDEO
JK751
V-OUT
V-IN
IC751
INPUT SELECT
SW CTL
Q308
BUFFER
TO SERVO/SYSTEM CONTROL BLOCK
C-SYNC
D-V
LP-SPL-PB-H
Q506
Q507
IC302 CCD DELAY LINE
OUTPUT (S/H)
CCD (2.5bit)
CCD (858bit)
CCD (847bit)
CCD (843.5bit)
CCD (6bit)
OUTPUT (S/H)
CENTER BIAS
CENTER BIAS
CLAMP
CLK
TO SERVO/SYSTEM CONTROL BLOCK
INSEL
VPS-CHK
Q307
VR301
E-E LEVEL
VR302
CAR/DEV
+5V
BUFFER
Q320
IC301
Y/C PROCESS
Q302
Q303
EQUALIZER /PEAKING
Q301
BUFFER
TO SERVO/SYSTEM CONTROL BLOCK
RF-SW
V-ENV
DECK MECHANISM
HEAD AMP CBA
IC3801 HEAD AMP
ENV DET
PB ON
REC OFF
AGC DET
DECK
VIDEO L HEAD
VIDEO R HEAD
CN3802
V (L)
V-COM
V (R)
V-COM
CN3801
CN301
V-ENV
RF-SW
Y-PB
C-PB
Y/C REC
TP301
Y-REC
TP303
C-REC
TP302
C-PB
WF5
B.P.F.
Q309
Q310
Q311
Q312
AL+5V
X301
4.43MHz
D-PB+5V
D-REC+5V
TO POWER SUPPLY BLOCK
ROTA
LP-H
TO SERVO/SYSTEM CONTROL BLOCK
FM MOD
1/2FH CPR SH
DOUBLE LIMIT
FM DEMOD
SUB LPF
AGC DET
VIDEO AGC
CLAMP
DOC DET
DELAY
VIDEO AMP
FBC
Y/C MIX
LPF
CLAMP
SYNC SEP
PICTURE CONTROL
NL DE EMPH
WHP NOI CAN
CORR
LIM
CLAMP
3.5MHz LPF
MAIN DE EMPH
M/D CLIP
MAIN EMPH
NL EMPH
DETAIL ENH
CLAMP
VCA
ATT
4.2V REG
P/S DET
PB AMP B.DEEM KILLER
COMB DRIVER AMP
90° P.S.
KIL-DET 1D-DET
321FH VCO
SLD
1/2
PB APC DET
REC APC DET
HALF H KILLER
BGP GEN
B.G
AGC DET
4.43MHz B.P.F.
B.G
PAL
4PHASE SHIFTER
AGC.D AMP
BURST EMPH
MAIN CONV
5.06M B.P.F.
SUB CONV
DIVIDE
BALANCER
3RD LOCK PROTECT
XO
REC APC DET
1MHz L.P.F.
KIL
VXO
XO IN
XO OUT

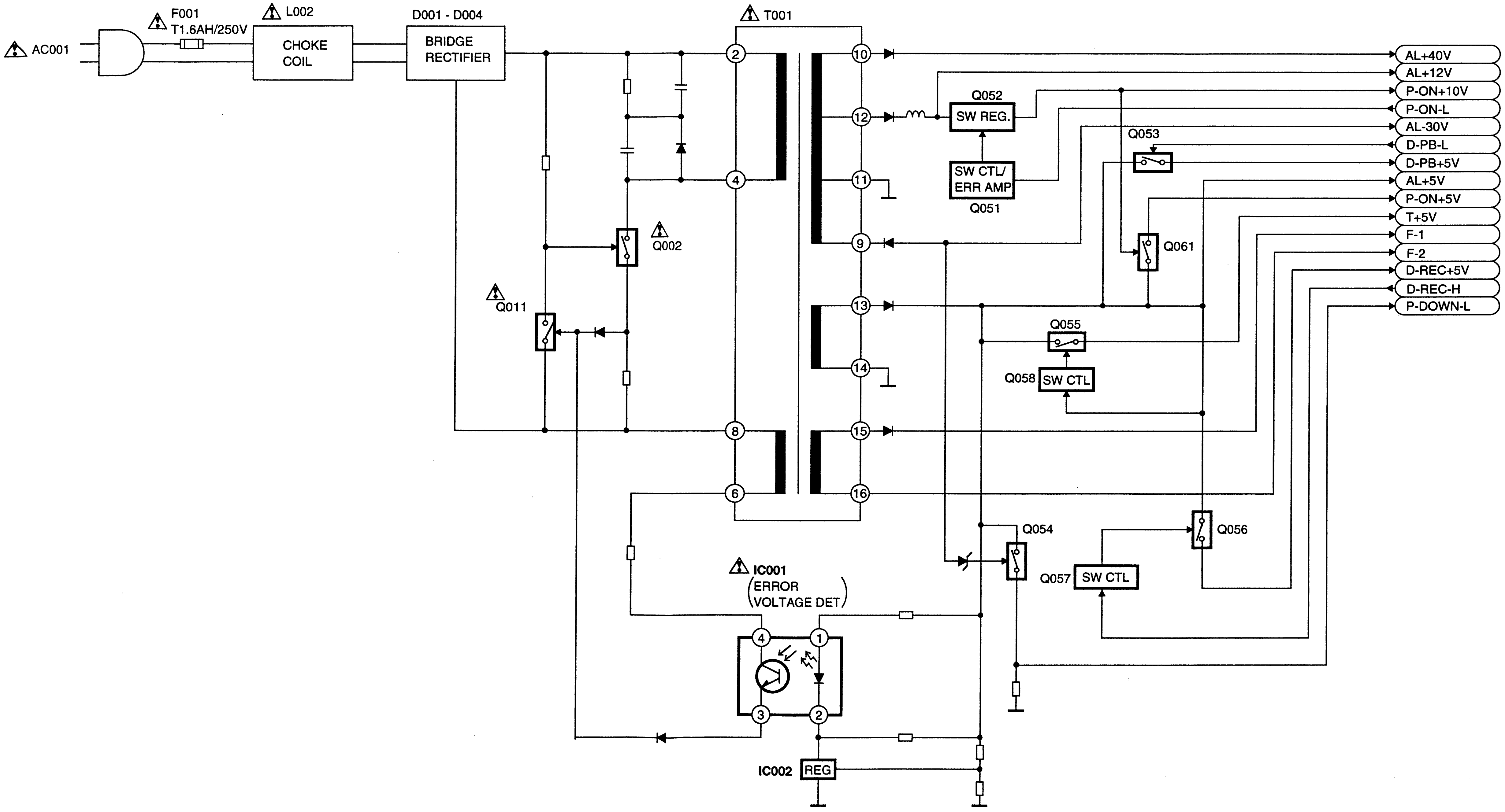
Audio Block Diagram



PB-AUDIO SIGNAL
REC-AUDIO SIGNAL
Mode : SP/REC
TP752
A-OUT
MD701
AUDIO-IN
IF701(IF CBA)
AUDIO
JK751
A-OUT
A-OUT
A-IN
A-IN
Q751
BUFFER
IC751
INPUT SELECT
SW CTL
TO SERVO/SYSTEM CONTROL BLOCK
INSEL
IC401 AUDIO
ALC DET
ALC
REC
PB
MUTE
LINE
PB-ON
EQ
REC-ON
REC OFF
AUTO BIAS
REC-ON
REC-OFF
T401
Q401
BIAS OSC
LP-H
A-MUTE-H
D-PB-L
D-REC-H
TO SERVO/SYSTEM CONTROL BLOCK
MAIN CBA
DECK MECHANISM
DECK
ACE HEAD CBA
AUDIO HEAD
AUDIO ERASE HEAD
CN2693
A-COM
A-PB/REC
AE-H
AE-H/FE-H
JOINT CBA
CL2692
CN2691
CN501
FE HEAD CBA
FULL ERASE HEAD
CL3802
FE-H
FE-H GND
FE-H GND
HEAD AMP CBA
CL3802
CN3801
CN301

Power Supply Block Diagram

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE T1.6AH/250V FUSE.


AC001
F001
T1.6AH/250V
L002
CHOKE COIL
D001 - D004
BRIDGE RECTIFIER
T001
Q002
Q011
2
4
8
6
10
12
11
9
13
14
15
16
Q052
SW REG.
SW CTL/ ERR AMP
Q051
Q053
Q061
Q055
Q058
SW CTL
Q054
Q056
Q057
SW CTL
IC001
(ERROR VOLTAGE DET)
4
1
3
2
IC002
REG
AL+40V
AL+12V
P-ON+10V
P-ON-L
AL-30V
D-PB-L
D-PB+5V
AL+5V
P-ON+5V
T+5V
F-1
F-2
D-REC+5V
D-REC-H
P-DOWN-L

SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Capacitor Temperature Markings

Mark	Capacity change rate	Standard temperature	Temperature range
(B)	±10%	20°C	-25~+85°C
(F)	+30 -80%	20°C	-25~+85°C
(SR)	±15%	20°C	-25~+85°C
(Z)	+30 -80%	20°C	-10~+70°C

Note:

1 Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.

2 All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).

3 Resistor wattages are 1/5W or 1/6W unless otherwise specified.

4 All capacitance values are indicated in µF ($P=10^{-6}\mu F$).

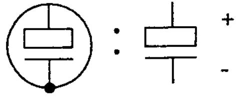
5 All voltages are DC voltages unless otherwise specified.

6 Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

Capacitors and transistors are represented by the following symbols.

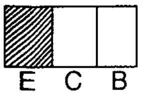
CBA Symbols

(Top View) (Bottom View)



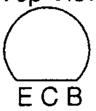
: Electrolytic Capacitor

(Bottom View)



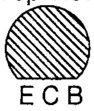
: Transistor or Digital Transistor

(Top View)



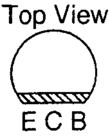
NPN Transistor

(Top View)



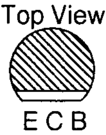
PNP Transistor

(Top View)



NPN Digital Transistor

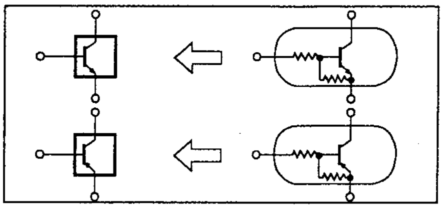
(Top View)



PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. **CAUTION:**
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

2. **CAUTION:**
Fixed Voltage power supply circuit is used in this unit.
If Main Fuse (F01) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

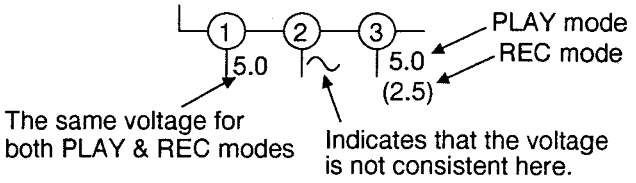
3. **Note:**
(1)Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
(2)To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Wire Connectors
(1)Prefix symbol "CN" means "connector." (Can disconnect and reconnect)
(2)Prefix symbol "CL" means "wire-solder holes of the PCB." (Wire is soldered directly.)

5. Note: Mark "•" is a leadless (chip) component.

6. Mode: SP/REC

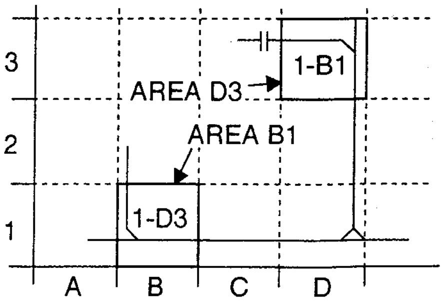
7. Voltage indications for PLAY and REC modes on the Schematics are as shown below:


①
②
③
5.0
∿
5.0
(2.5)
PLAY mode
REC mode
The same voltage for both PLAY & REC modes
Indicates that the voltage is not consistent here.

Unit: Volts

8. How to read converged lines

1-D3
Distinction Area
Line Number
(1 to 3 digits)
Examples:
1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".

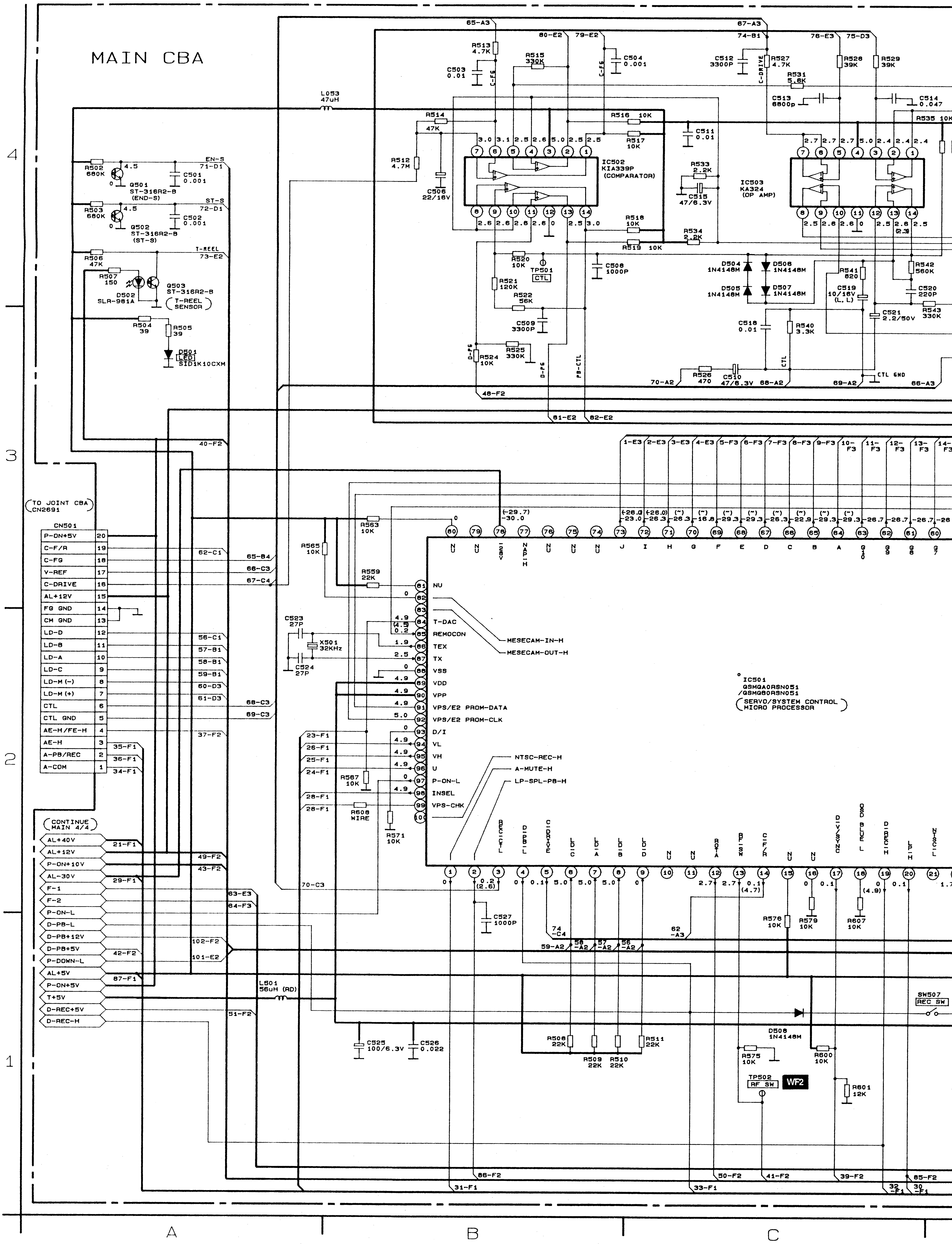


9. Test Point Information

⦶ : Indicates a test point with a jumper wire across a hole in the PCB.
▭→ : Used to indicate a test point with a component lead on foil side.
▨ : Used to indicate a test point with no test pin.
● : Used to indicate a test point with a test pin.

Main 1/4 Schematic Diagram

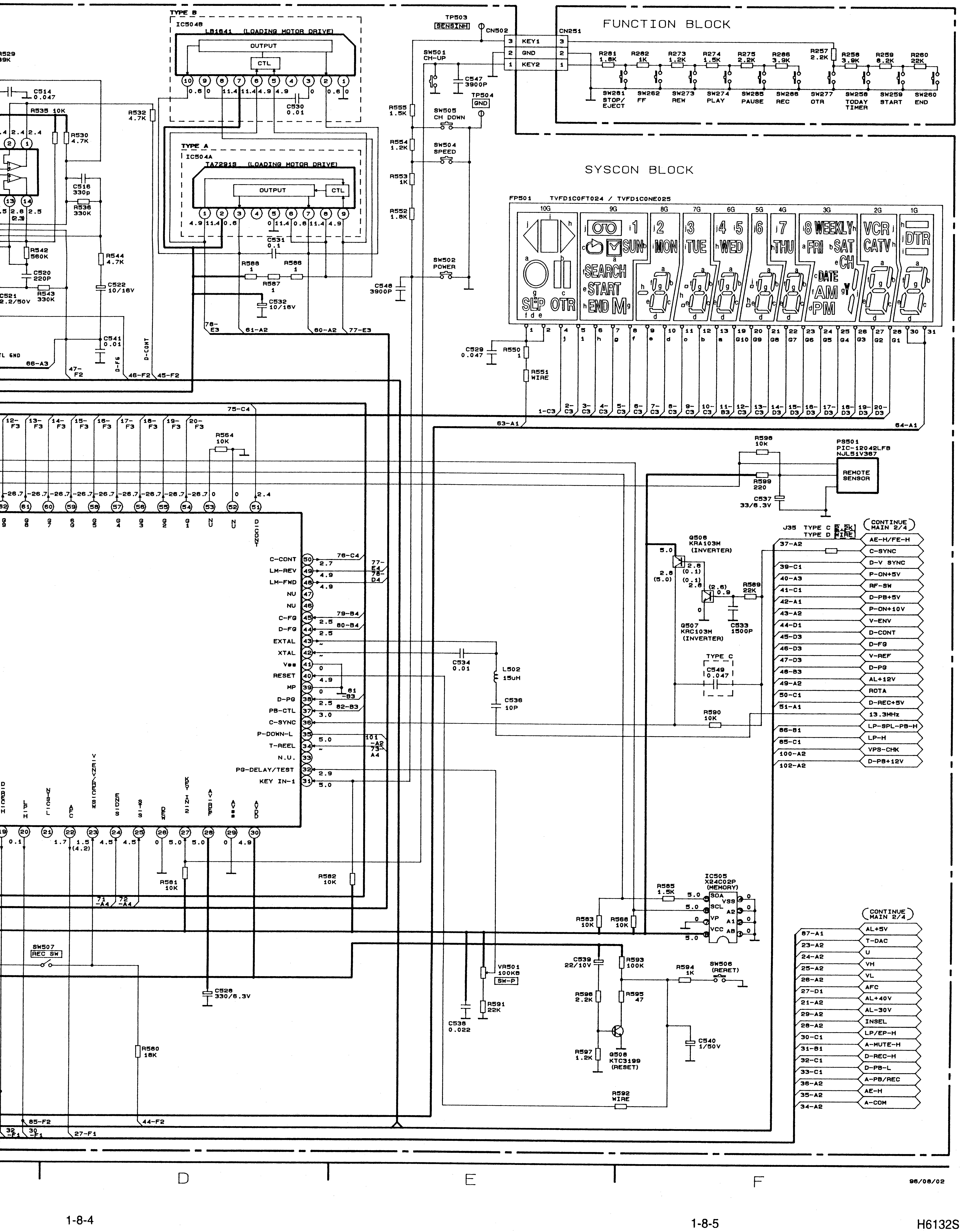
Note: The loading moto
These two types are ex
used whichever the mo
A and type B is shown i



MAIN CBA
IC502 KIA339P (COMPARATOR)
IC503 KA324 (OP AMP)
IC501 QSMGA0RSN051 /QSMGB0RSN051 (SERVO/SYSTEM CONTROL MICRO PROCESSOR)
Q501 ST-316R2-B (END-S)
Q502 ST-316R2-B (ST-S)
Q503 ST-316R2-B (T-REEL SENSOR)
D502 SLR-981A
D501 LED SID1K10CXM
L053 47uH
L501 56uH (RD)
X501 32KHz
TP501 CTL
TP502 RF SW
WF2
SW507 REC SW
D504 1N4148M
D505 1N4148M
D506 1N4148M
D507 1N4148M
D508 1N4148M
(TO JOINT CBA CN2691)
CN501
P-ON+5V
C-F/R
C-FG
V-REF
C-DRIVE
AL+12V
FG GND
CM GND
LD-D
LD-B
LD-A
LD-C
LD-M (-)
LD-M (+)
CTL
CTL GND
AE-H/FE-H
AE-H
A-PB/REC
A-COM
(CONTINUE MAIN 4/4)
AL+40V
AL+12V
P-ON+10V
AL-30V
F-1
F-2
P-ON-L
D-PB-L
D-PB+12V
D-PB+5V
P-DOWN-L
AL+5V
P-ON+5V
T+5V
D-REC+5V
D-REC-H
NU
T-DAC
REMOCON
TEX
TX
VSS
VDD
VPP
VPS/E2 PROM-DATA
VPS/E2 PROM-CLK
D/I
VL
VH
U
P-ON-L
INSEL
VPS-CHK
MESECAM-IN-H
MESECAM-OUT-H
NTSC-REC-H
A-MUTE-H
LP-SPL-PB-H
CTL GND
A
B
C
1
2
3
4

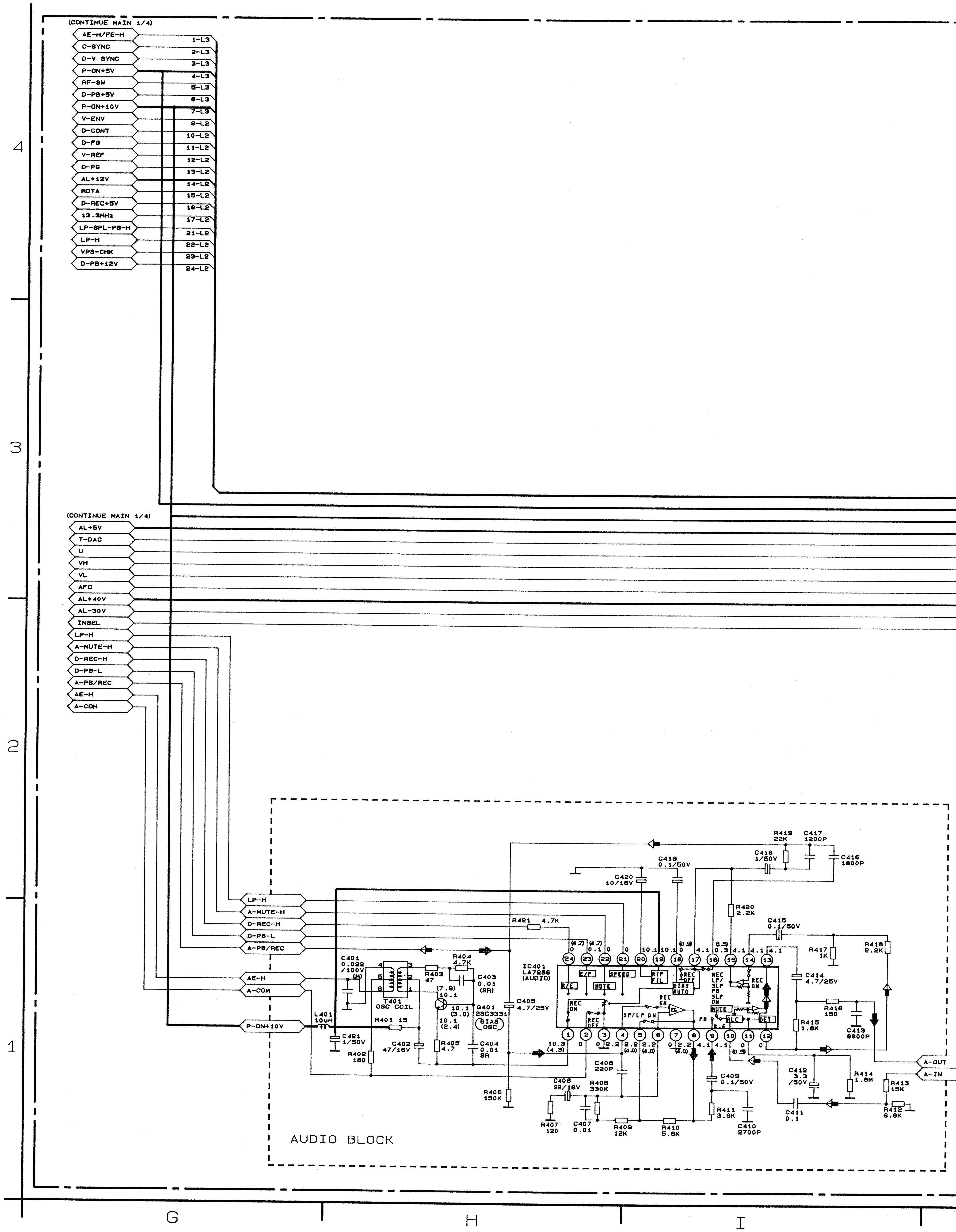
e loading motor drive IC is either type A or type B.
o types are exchangeable and can be equally
chever the model is. The difference between type
e B is shown in the table below.

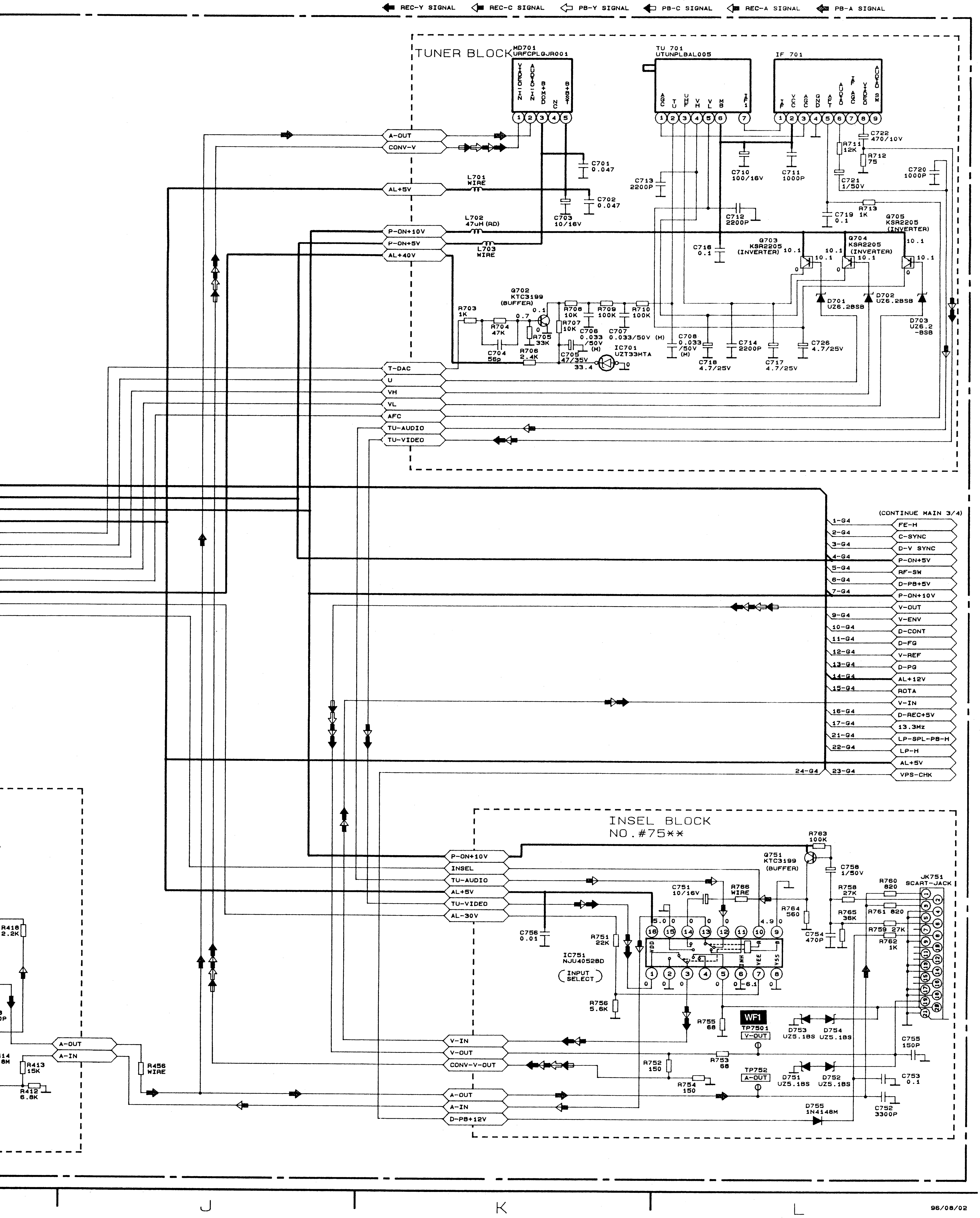
	IC504A	IC504B	C530
Type A	TA7291S	Not Used	Not Used
Type B	Not Used	LB1641	Used



TYPE B
IC504B
LB1641 (LOADING MOTOR DRIVE)
OUTPUT
CTL
TYPE A
IC504A
TA7291S (LOADING MOTOR DRIVE)
TP503
SENSINH
CN502
KEY1
GND
KEY2
SW501 CH-UP
SW505 CH DOWN
SW504 SPEED
SW502 POWER
TP504 GND
FUNCTION BLOCK
CN251
SW261 STOP/EJECT
SW262 FF
SW273 REW
SW274 PLAY
SW285 PAUSE
SW286 REC
SW277 OTR
SW258 TODAY TIMER
SW259 START
SW260 END
SYSCON BLOCK
FP501 TVFD1C0FT024 / TVFD1C0NE025
PS501 PIC-12042LF8 NJL51V387
REMOTE SENSOR
Q506 KRA103M (INVERTER)
Q507 KRC103M (INVERTER)
TYPE C
L502 15uH
C-CONT
LM-REV
LM-FWD
NU
C-FG
D-FG
EXTAL
XTAL
Vss
RESET
MP
D-PG
PB-CTL
C-SYNC
P-DOWN-L
T-REEL
N.U.
PG-DELAY/TEST
KEY IN-1
J35 TYPE C 2.2K TYPE D WIRE
CONTINUE MAIN 2/4
AE-H/FE-H
C-SYNC
D-V SYNC
P-ON+5V
RF-SW
D-PB+5V
P-ON+10V
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
LP-SPL-PB-H
LP-H
VPS-CHK
D-PB+12V
IC505 X24C02P (MEMORY)
SDA
SCL
VP
VCC
VSS
A2
A1
A0
SW507 REC SW
VR501 100KB SW-P
SW506 (RESET)
Q508 KTC3199 (RESET)
AL+5V
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
INSEL
LP/EP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
D
E
F
98/08/02

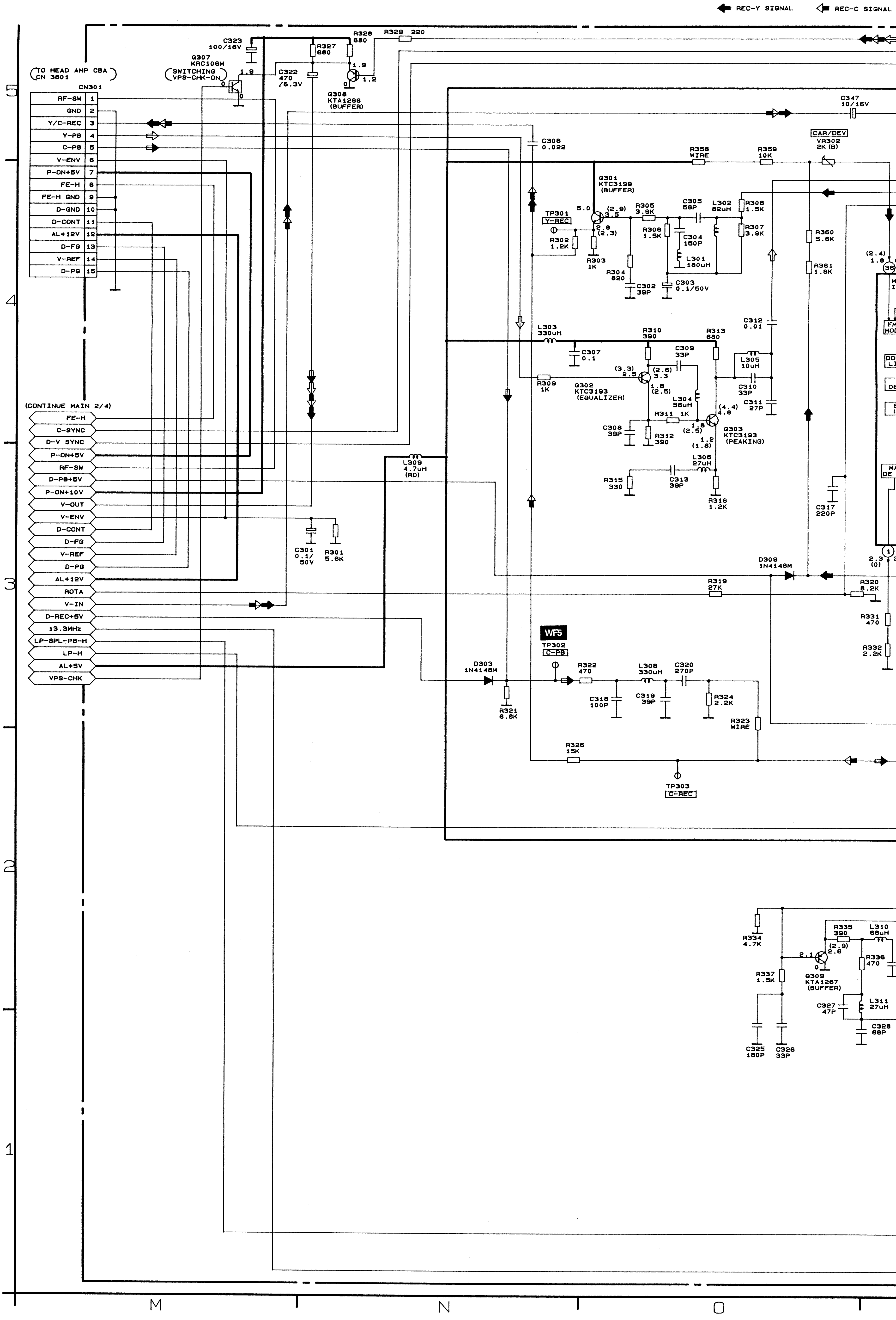
Main 2/4 Schematic Diagram


(CONTINUE MAIN 1/4)
AE-H/FE-H
C-SYNC
D-V SYNC
P-ON+5V
RF-SW
D-PB+5V
P-ON+10V
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
LP-SPL-PB-H
LP-H
VPS-CHK
D-PB+12V
1-L3
2-L3
3-L3
4-L3
5-L3
6-L3
7-L3
9-L2
10-L2
11-L2
12-L2
13-L2
14-L2
15-L2
16-L2
17-L2
21-L2
22-L2
23-L2
24-L2
(CONTINUE MAIN 1/4)
AL+5V
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
INSEL
LP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
P-ON+10V
A-OUT
A-IN
IC401
LA7286
(AUDIO)
Q401
2SC3331
BIAS OSC
T401
OSC COIL
L401
10uH
C401 0.022 /100V (M)
C402 47/16V
C403 0.01 (SR)
C404 0.01 SR
C405 4.7/25V
C406 22/16V
C407 0.01
C408 220P
C409 0.1/50V
C410 2700P
C411 0.1
C412 3.3 /50V
C413 6800P
C414 4.7/25V
C415 0.1/50V
C416 1800P
C417 1200P
C418 1/50V
C419 0.1/50V
C420 10/16V
C421 1/50V
R401 15
R402 180
R403 47
R404 4.7K
R405 4.7
R406 150K
R407 120
R408 330K
R409 12K
R410 5.6K
R411 3.9K
R412 6.8K
R413 15K
R414 1.8M
R415 1.8K
R416 150
R417 1K
R418 2.2K
R419 22K
R420 2.2K
R421 4.7K
R/E
E/P
MUTE
SPEED
RIP FIL
REC OFF
BIAS AUTO
REC LP/ SLP PB SLP ON
REC ON
MUTE
ALC
DET
SP/LP ON
EQ
PB
R.E
AUDIO BLOCK
4
3
2
1
G
H
I

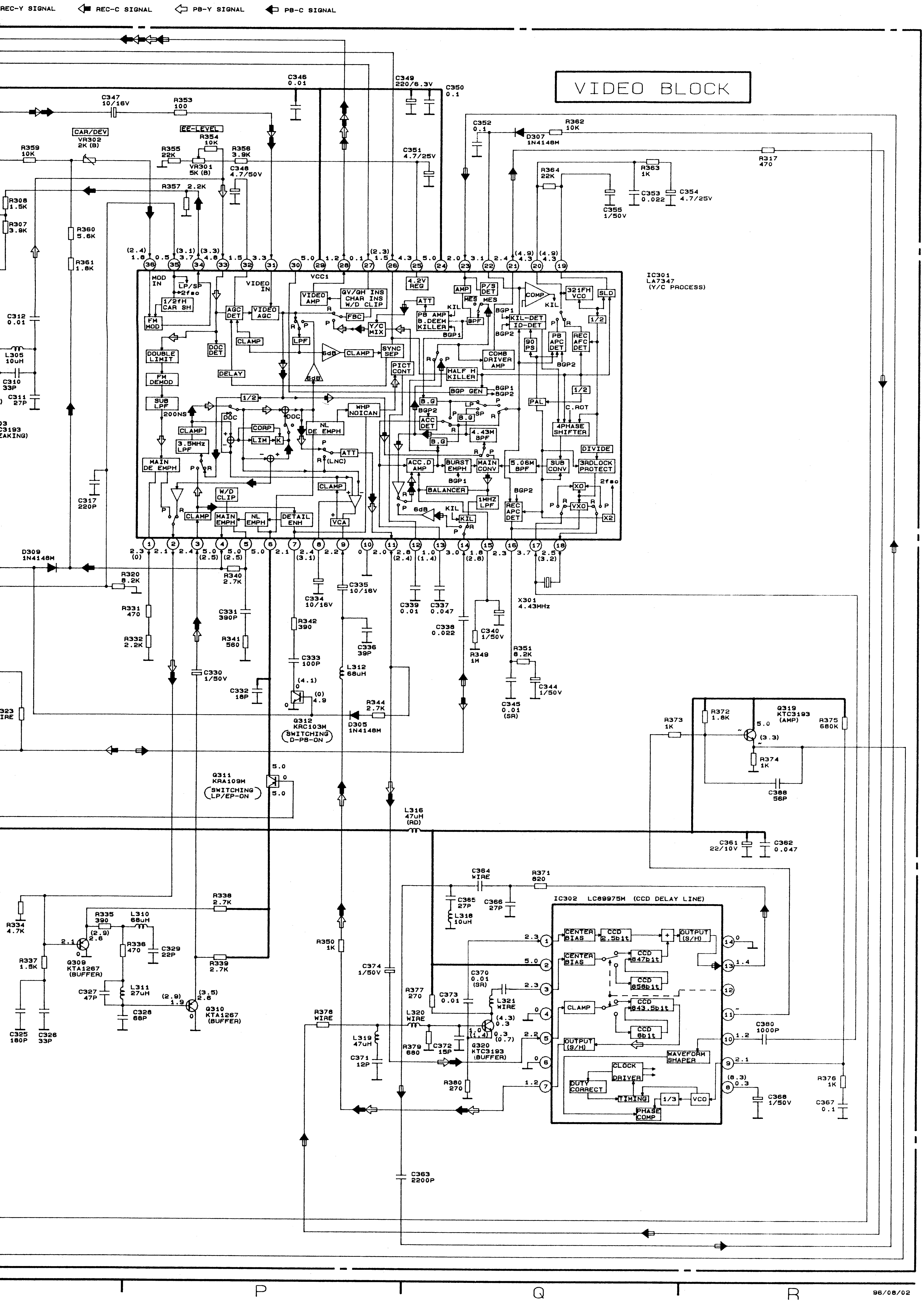

REC-Y SIGNAL
REC-C SIGNAL
PB-Y SIGNAL
PB-C SIGNAL
REC-A SIGNAL
PB-A SIGNAL
TUNER BLOCK
MD701
URFCPLGJR001
VIDEO-IN
AUDIO-IN
B+MOD
NC
B+BST
TU 701
UTUNPLBAL005
IF 701
A-OUT
CONV-V
AL+5V
P-ON+10V
P-ON+5V
AL+40V
C701 0.047
C702 0.047
C703 10/16V
L701 WIRE
L702 47uH (RD)
L703 WIRE
C713 2200P
C710 100/16V
C711 1000P
R711 12K
R712 75
C722 470/10V
C720 1000P
C721 1/50V
C712 2200P
C719 0.1
R713 1K
Q705 KSR2205 (INVERTER)
Q703 KSR2205 (INVERTER)
Q704 KSR2205 (INVERTER)
C716 0.1
D701 UZ6.2BSB
D702 UZ6.2BSB
D703 UZ6.2 -BSB
Q702 KTC3199 (BUFFER)
R703 1K
R704 47K
C704 56p
R705 33K
R706 2.4K
R708 10K
R707 10K
R709 100K
R710 100K
C706 0.033 /50V (M)
C707 0.033/50V (M)
C705 47/35V
IC701 UZT33MTA
33.4
C708 0.033 /50V (M)
C714 2200P
C726 4.7/25V
C718 4.7/25V
C717 4.7/25V
T-DAC
U
VH
VL
AFC
TU-AUDIO
TU-VIDEO
(CONTINUE MAIN 3/4)
1-G4 FE-H
2-G4 C-SYNC
3-G4 D-V SYNC
4-G4 P-ON+5V
5-G4 RF-SW
6-G4 D-PB+5V
7-G4 P-ON+10V
V-OUT
9-G4 V-ENV
10-G4 D-CONT
11-G4 D-FG
12-G4 V-REF
13-G4 D-PG
14-G4 AL+12V
15-G4 ROTA
V-IN
16-G4 D-REC+5V
17-G4 13.3Mz
21-G4 LP-SPL-PB-H
22-G4 LP-H
AL+5V
24-G4 23-G4 VPS-CHK
INSEL BLOCK
NO.#75**
P-ON+10V
INSEL
TU-AUDIO
AL+5V
TU-VIDEO
AL-30V
R763 100K
Q751 KTC3199 (BUFFER)
C758 1/50V
C751 10/16V
R766 WIRE
R764 560
R758 27K
R760 820
JK751 SCART-JACK
R765 36K
R761 820
R759 27K
R762 1K
C754 470P
C756 0.01
R751 22K
IC751 NJU4052BD
(INPUT SELECT)
R756 5.6K
R755 68
WF1
TP7501 V-OUT
D753 UZ5.1BS
D754 UZ5.1BS
C755 150P
R752 150
R753 68
TP752 A-OUT
D751 UZ5.1BS
D752 UZ5.1BS
C753 0.1
R754 150
D755 1N4148M
C752 3300P
V-IN
V-OUT
CONV-V-OUT
A-OUT
A-IN
D-PB+12V
R416 2.2K
A-OUT
A-IN
R413 15K
R412 6.8K
R456 WIRE
J
K
L

96/08/02

Main 3/4 Schematic Diagram



REC-Y SIGNAL
REC-C SIGNAL
TO HEAD AMP CBA CN 3801
CN301
RF-SW 1
GND 2
Y/C-REC 3
Y-PB 4
C-PB 5
V-ENV 6
P-ON+5V 7
FE-H 8
FE-H GND 9
D-GND 10
D-CONT 11
AL+12V 12
D-FG 13
V-REF 14
D-PG 15
C323 100/16V
Q307 KRC106M
SWITCHING VPS-CHK-ON
C322 470 /6.3V
R327 680
R328 680
R329 220
Q308 KTA1266 (BUFFER)
C308 0.022
C347 10/16V
CAR/DEV VR302 2K (B)
R358 WIRE
R359 10K
Q301 KTC3199 (BUFFER)
TP301 Y-REC
R302 1.2K
R303 1K
R304 820
R305 3.9K
R306 1.5K
C305 56P
L302 82uH
R308 1.5K
R307 3.9K
C304 150P
L301 180uH
C302 39P
C303 0.1/50V
R360 5.6K
R361 1.8K
L303 330uH
C307 0.1
R309 1K
R310 390
R313 680
C309 33P
Q302 KTC3193 (EQUALIZER)
L304 56uH
R311 1K
C306 39P
R312 390
L305 10uH
C310 33P
C311 27P
C312 0.01
Q303 KTC3193 (PEAKING)
L306 27uH
R315 330
C313 39P
R316 1.2K
C317 220P
L309 4.7uH (RD)
(CONTINUE MAIN 2/4)
FE-H
C-SYNC
D-V SYNC
P-ON+5V
RF-SW
D-PB+5V
P-ON+10V
V-OUT
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
V-IN
D-REC+5V
13.3MHz
LP-SPL-PB-H
LP-H
AL+5V
VPS-CHK
C301 0.1/ 50V
R301 5.6K
D309 1N4148M
R319 27K
R320 8.2K
R331 470
R332 2.2K
WF5
TP302 C-PB
D303 1N4148M
R321 6.8K
R322 470
L308 330uH
C320 270P
C318 100P
C319 39P
R324 2.2K
R323 WIRE
R326 15K
TP303 C-REC
R334 4.7K
R335 390
L310 68uH
R336 470
Q309 KTA1267 (BUFFER)
R337 1.5K
C327 47P
L311 27uH
C328 68P
C325 180P
C326 33P
5
4
3
2
1
M
N
O

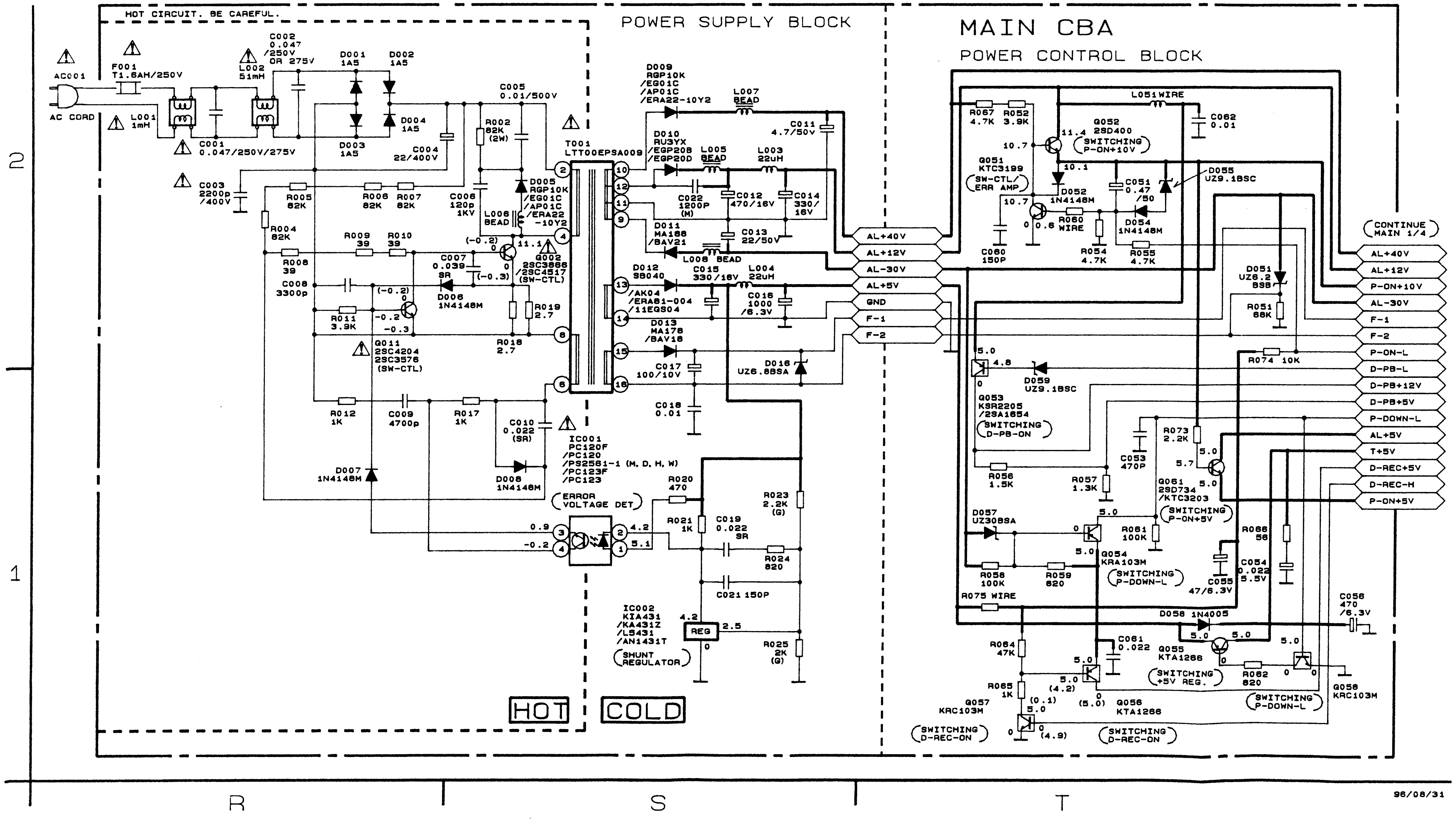

REC-Y SIGNAL
REC-C SIGNAL
PB-Y SIGNAL
PB-C SIGNAL
VIDEO BLOCK
IC301 LA7347 (Y/C PROCESS)
IC302 LC89975M (CCD DELAY LINE)
C346 0.01
C349 220/6.3V
C350 0.1
C347 10/16V
R353 100
CAR/DEV
VR302 2K (B)
EE-LEVEL
R354 10K
R359 10K
R355 22K
VR301 5K (B)
R356 3.9K
C348 4.7/50V
C351 4.7/25V
C352 0.1
D307 1N4148M
R362 10K
R317 470
R364 22K
R363 1K
C353 0.022
C354 4.7/25V
C355 1/50V
R357 2.2K
R308 1.5K
R307 3.9K
R360 5.6K
R361 1.8K
C312 0.01
L305 10uH
C310 33P
C311 27P
C317 220P
D309 1N4148M
R320 8.2K
R340 2.7K
R331 470
R332 2.2K
C331 390P
R341 560
C330 1/50V
C332 18P
C334 10/16V
R342 390
C333 100P
C335 10/16V
C336 39P
L312 68uH
Q312 KRC103M (SWITCHING D-PB-ON)
R344 2.7K
D305 1N4148M
C339 0.01
C337 0.047
C338 0.022
C340 1/50V
R349 1M
X301 4.43MHz
R351 8.2K
C344 1/50V
C345 0.01 (SR)
Q311 KRA109M (SWITCHING LP/EP-ON)
L316 47uH (RD)
R373 1K
R372 1.8K
Q319 KTC3193 (AMP)
R375 680K
R374 1K
C388 56P
C361 22/10V
C362 0.047
C364 WIRE
R371 820
C365 27P
C366 27P
L318 10uH
R338 2.7K
R335 390
L310 68uH
R336 470
C329 22P
R334 4.7K
Q309 KTA1267 (BUFFER)
R337 1.5K
R339 2.7K
L311 27uH
C327 47P
C328 68P
Q310 KTA1267 (BUFFER)
C325 180P
C326 33P
R350 1K
C374 1/50V
R377 270
C373 0.01
C370 0.01 (SR)
L321 WIRE
R378 WIRE
L320 WIRE
L319 47uH
C371 12P
R379 680
C372 15P
Q320 KTC3193 (BUFFER)
R380 270
C380 1000P
R376 1K
C368 1/50V
C367 0.1
C363 2200P
MOD IN
LP/SP
2fso
1/2fH CAR SH
FM MOD
AGC DET
VIDEO AGC
VIDEO IN
VCC1
VIDEO AMP
QV/QH INS CHAR INS W/D CLIP
4.2V REG
ATT
FBC
Y/C MIX
LPF
6dB
CLAMP
SYNC SEP
PICT CONT
PB AMP B.DEEM KILLER
AMP
P/S DET
MES
BPF
COMP
321FH VCO
SLD
KIL-DET
ID-DET
90 PS
PB APC DET
REC AFC DET
1/2
COMB DRIVER AMP
HALF H KILLER
BGP GEN
BGP1
BGP2
PAL
C.ROT
4PHASE SHIFTER
DOUBLE LIMIT
FM DEMOD
DOC DET
DELAY
SUB LPF
200NS
DOC
CORP
LIM
K
WHP NOICAN
NL DE EMPH
ATT
(LNC)
3.5MHz LPF
MAIN DE EMPH
B.G
ACC DET
4.43M BPF
DIVIDE
ACC.D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
3RDLOCK PROTECT
BALANCER
1MHZ LPF
REC APC DET
XO
VXO
X2
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL ENH
VCA
CENTER BIAS
CCD 2.5bit
OUTPUT (S/H)
CCD 847bit
CCD 858bit
CCD 843.5bit
CCD 8bit
WAVEFORM SHAPER
CLOCK DRIVER
DUTY CORRECT
TIMING
1/3
VCO
PHASE COMP
P
Q
R
96/08/02

Main 4/4 Schematic Diagram

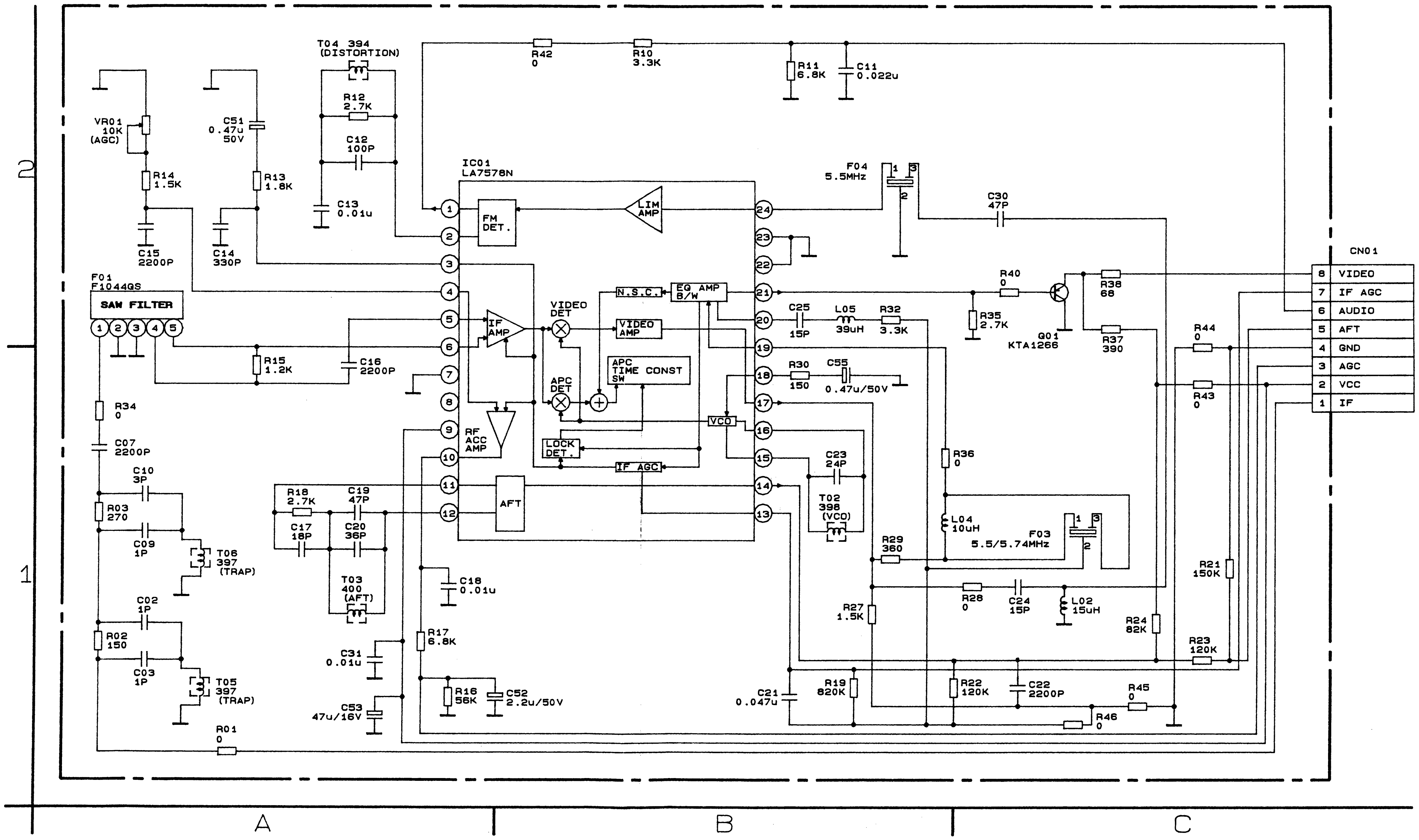
NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING HOT GND AS A COMMON TERMINAL.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

CAUTION !
Fixed voltage power supply circuit is used in this unit.
If Main Fuse (F01) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

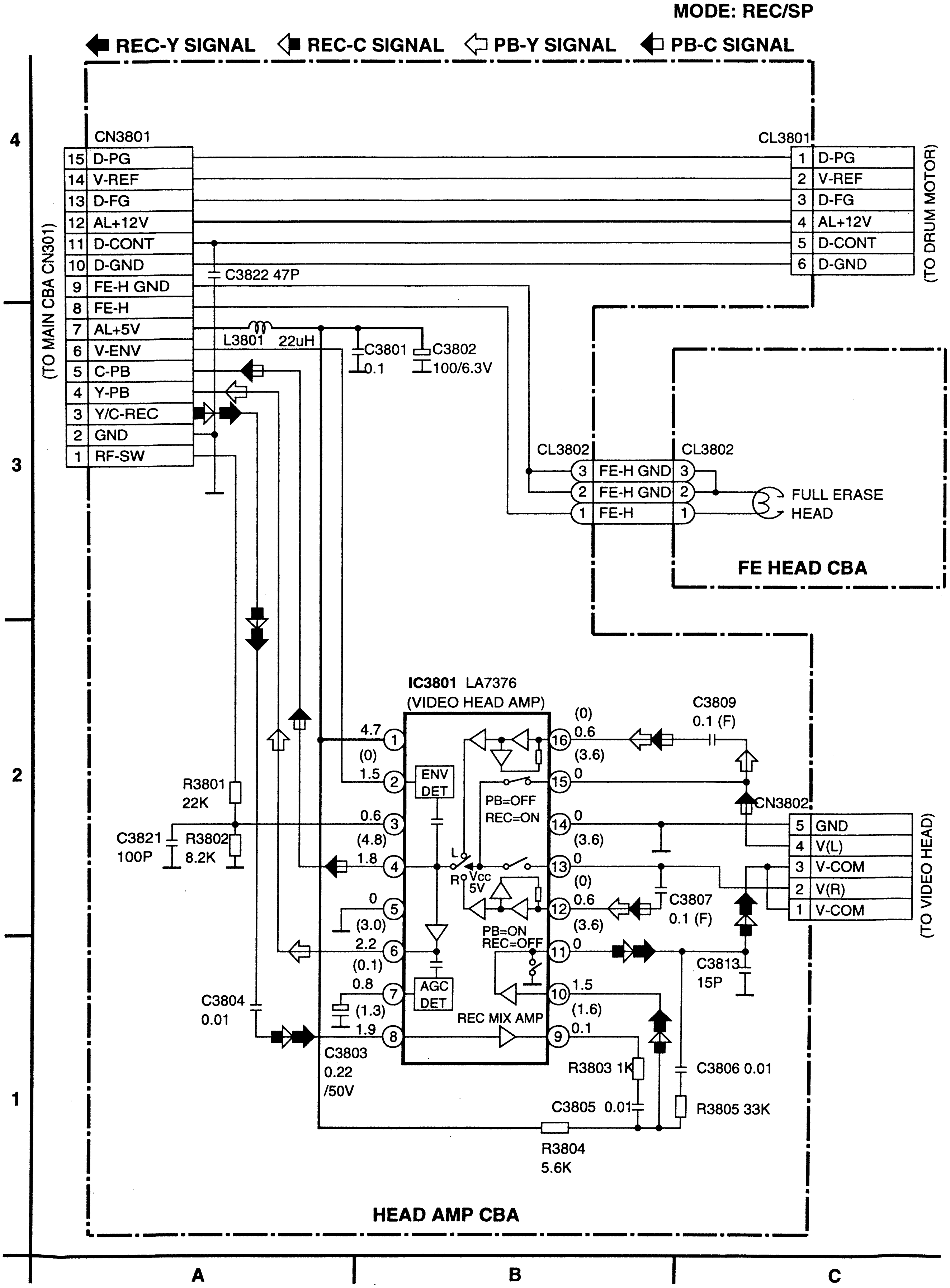

HOT CIRCUIT. BE CAREFUL.
POWER SUPPLY BLOCK
MAIN CBA
POWER CONTROL BLOCK
AC001
AC CORD
F001 T1.6AH/250V
L001 1mH
L002 51mH
C001 0.047/250V/275V
C002 0.047 /250V OR 275V
C003 2200p /400V
D001 1A5
D002 1A5
D003 1A5
D004 1A5
C004 22/400V
C005 0.01/500V
R002 82K (2W)
R004 82K
R005 82K
R006 82K
R007 82K
C006 120p 1KV
L006 BEAD
D005 RGP10K /EG01C /AP01C /ERA22 -10Y2
R008 39
R009 39
R010 39
C007 0.039 SR
Q002 2SC3866 /2SC4517 (SW-CTL)
C008 3300p
D006 1N4148M
R011 3.9K
R019 2.7
R018 2.7
Q011 2SC4204 2SC3576 (SW-CTL)
R012 1K
C009 4700p
R017 1K
C010 0.022 (SR)
D007 1N4148M
D008 1N4148M
T001 LTT00EPSA009
D009 RGP10K /EG01C /AP01C /ERA22-10Y2
L007 BEAD
C011 4.7/50V
D010 RU3YX /EGP20B /EGP20D
L005 BEAD
L003 22uH
C022 1200P (M)
C012 470/16V
C014 330/ 16V
D011 MA188 /BAV21
C013 22/50V
L008 BEAD
D012 SB040 /AK04 /ERA81-004 /11EQS04
C015 330/16V
L004 22uH
C016 1000 /6.3V
D013 MA178 /BAV18
C017 100/10V
D016 UZ6.8BSA
C018 0.01
IC001 PC120F /PC120 /PS2561-1 (M, D, H, W) /PC123F /PC123
ERROR VOLTAGE DET
R020 470
R021 1K
C019 0.022 SR
R023 2.2K (G)
R024 820
C021 150P
IC002 KIA431 /KA431Z /LS431 /AN1431T
SHUNT REGULATOR
REG
R025 2K (G)
HOT
COLD
AL+40V
AL+12V
AL-30V
AL+5V
GND
F-1
F-2
L051 WIRE
C062 0.01
R067 4.7K
R052 3.9K
Q052 2SD400
SWITCHING P-ON+10V
Q051 KTC3199
SW-CTL/ ERR AMP
D052 1N4148M
C051 0.47 /50
D055 UZ9.1BSC
C060 150P
R060 WIRE
R054 4.7K
D054 1N4148M
R055 4.7K
CONTINUE MAIN 1/4
D051 UZ6.2 BSB
R051 68K
R074 10K
P-ON+10V
P-ON-L
D-PB-L
D-PB+12V
D-PB+5V
P-DOWN-L
T+5V
D-REC+5V
D-REC-H
P-ON+5V
D059 UZ9.1BSC
Q053 KSR2205 /2SA1654
SWITCHING D-PB-ON
C053 470P
R073 2.2K
R056 1.5K
R057 1.3K
Q061 2SD734 /KTC3203
SWITCHING P-ON+5V
D057 UZ30BSA
R061 100K
Q054 KRA103M
SWITCHING P-DOWN-L
R066 56
C054 0.022 5.5V
C055 47/6.3V
R058 100K
R059 820
R075 WIRE
D058 1N4005
C056 470 /6.3V
R064 47K
C061 0.022
Q055 KTA1266
SWITCHING +5V REG.
R062 820
Q058 KRC103M
R065 1K
Q057 KRC103M
Q056 KTA1266
SWITCHING D-REC-ON
SWITCHING P-DOWN-L
SWITCHING D-REC-ON
2
1
R
S
T
96/08/31

IF Schematic Diagram

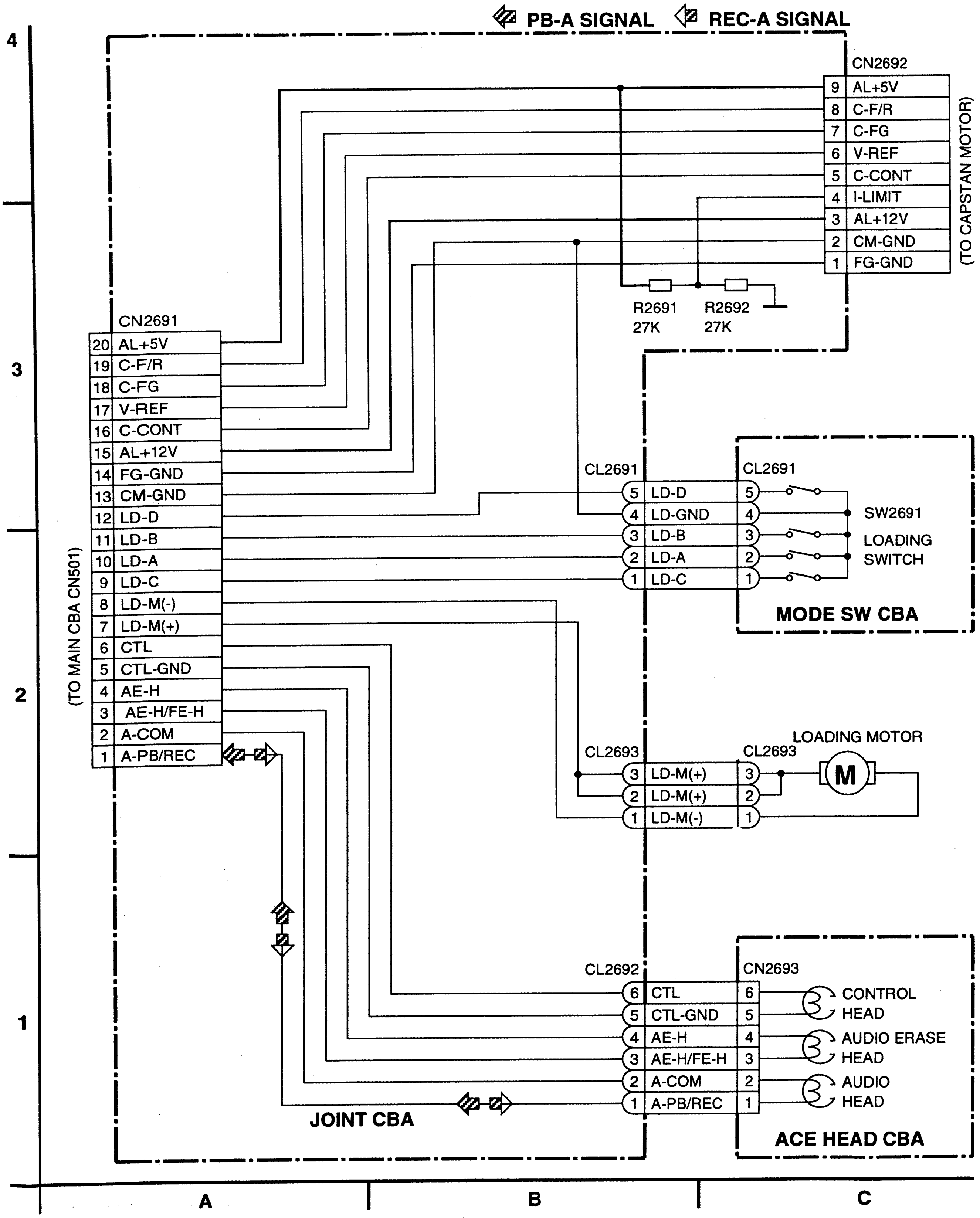


T04 394
(DISTORTION)
R42
0
R10
3.3K
R11
6.8K
C11
0.022u
VR01
10K
(AGC)
C51
0.47u
50V
R12
2.7K
C12
100P
R14
1.5K
R13
1.8K
C13
0.01u
IC01
LA7578N
F04
5.5MHz
C30
47P
C15
2200P
C14
330P
FM
DET.
LIM
AMP
CN01
F01
F1044QS
SAW FILTER
1
2
3
4
5
R40
0
R38
68
N.S.C.
EQ AMP
B/W
VIDEO
DET
IF
AMP
VIDEO
AMP
C25
15P
L05
39uH
R32
3.3K
R35
2.7K
Q01
KTA1266
R37
390
R44
0
R15
1.2K
C16
2200P
APC
TIME CONST
SW
APC
DET
R30
150
C55
0.47u/50V
R43
0
R34
0
RF
ACC
AMP
VCO
LOCK
DET.
IF AGC
C07
2200P
C10
3P
R03
270
C09
1P
T06
397
(TRAP)
R18
2.7K
C19
47P
C17
18P
C20
36P
AFT
C23
24P
T02
398
(VCO)
R36
0
L04
10uH
F03
5.5/5.74MHz
R29
360
T03
400
(AFT)
C18
0.01u
R21
150K
C02
1P
R02
150
C03
1P
T05
397
(TRAP)
R17
6.8K
C31
0.01u
R16
56K
C52
2.2u/50V
C53
47u/16V
R28
0
C24
15P
L02
15uH
R27
1.5K
R24
82K
R23
120K
C21
0.047u
R19
820K
R22
120K
C22
2200P
R45
0
R46
0
R01
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
8 VIDEO
7 IF AGC
6 AUDIO
5 AFT
4 GND
3 AGC
2 VCC
1 IF
A
B
C
1
2

Head Amp/FE-Head Schematic Diagram


MODE: REC/SP
REC-Y SIGNAL
REC-C SIGNAL
PB-Y SIGNAL
PB-C SIGNAL
CN3801
15 D-PG
14 V-REF
13 D-FG
12 AL+12V
11 D-CONT
10 D-GND
9 FE-H GND
8 FE-H
7 AL+5V
6 V-ENV
5 C-PB
4 Y-PB
3 Y/C-REC
2 GND
1 RF-SW
(TO MAIN CBA CN301)
CL3801
1 D-PG
2 V-REF
3 D-FG
4 AL+12V
5 D-CONT
6 D-GND
(TO DRUM MOTOR)
C3822 47P
L3801 22uH
C3801 0.1
C3802 100/6.3V
CL3802
3 FE-H GND
2 FE-H GND
1 FE-H
CL3802
FULL ERASE HEAD
FE HEAD CBA
IC3801 LA7376
(VIDEO HEAD AMP)
ENV DET
AGC DET
PB=OFF REC=ON
PB=ON REC=OFF
L
R
Vcc 5V
REC MIX AMP
4.7
(0) 1.5
0.6
(4.8) 1.8
0
(3.0) 2.2
(0.1) 0.8
(1.3) 1.9
(0) 0.6
(3.6) 0
0
(3.6) 0
(0) 0.6
(3.6) 0
1.5
(1.6) 0.1
C3809 0.1 (F)
CN3802
5 GND
4 V(L)
3 V-COM
2 V(R)
1 V-COM
(TO VIDEO HEAD)
C3807 0.1 (F)
C3813 15P
R3801 22K
C3821 100P
R3802 8.2K
C3804 0.01
C3803 0.22 /50V
R3803 1K
C3806 0.01
C3805 0.01
R3805 33K
R3804 5.6K
HEAD AMP CBA
1
2
3
4
A
B
C

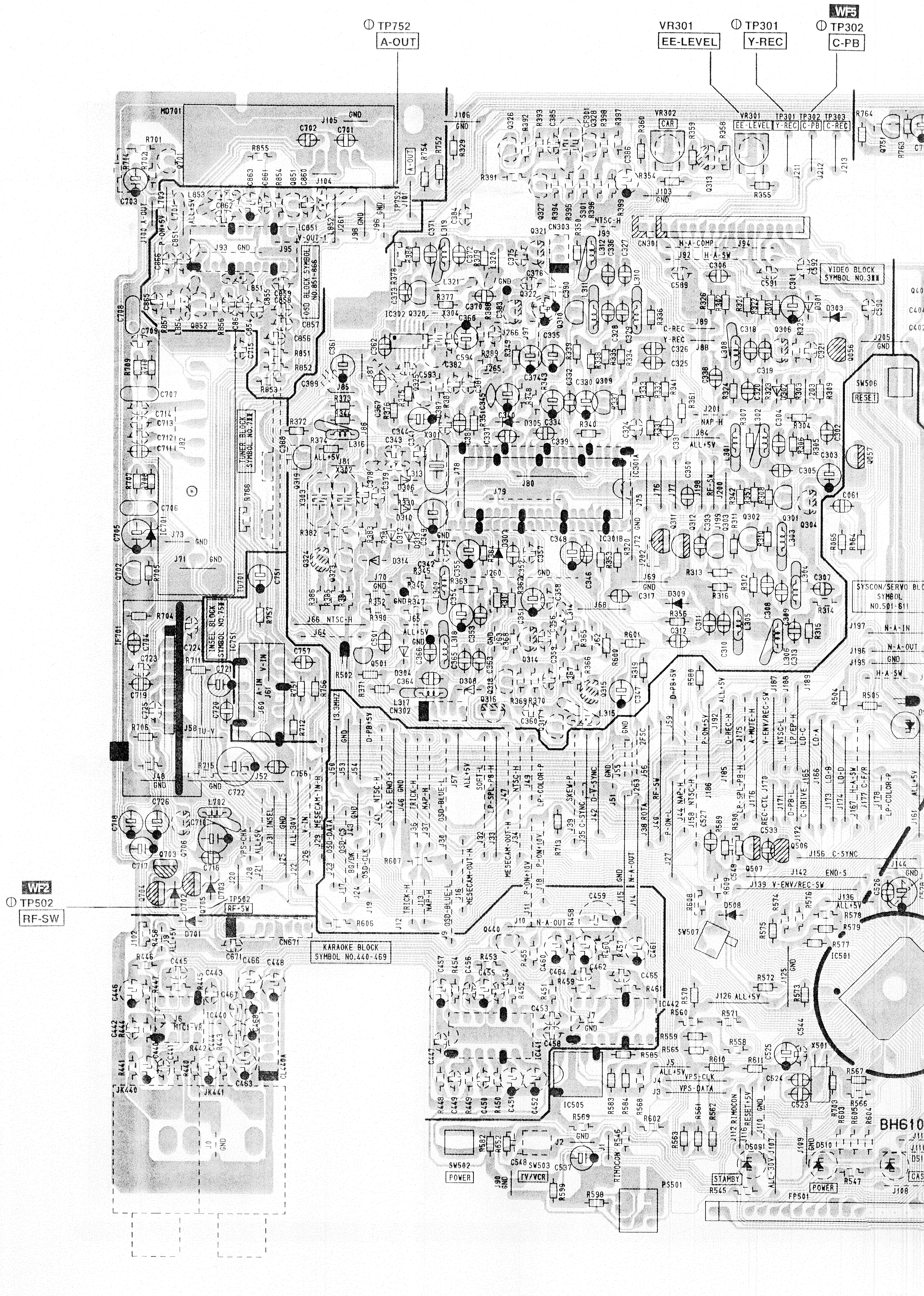
Joint/Mode Sw/Schematic Diagram


PB-A SIGNAL
REC-A SIGNAL
4
3
2
1
A
B
C
CN2692
9 AL+5V
8 C-F/R
7 C-FG
6 V-REF
5 C-CONT
4 I-LIMIT
3 AL+12V
2 CM-GND
1 FG-GND
(TO CAPSTAN MOTOR)
R2691 27K
R2692 27K
CN2691
20 AL+5V
19 C-F/R
18 C-FG
17 V-REF
16 C-CONT
15 AL+12V
14 FG-GND
13 CM-GND
12 LD-D
11 LD-B
10 LD-A
9 LD-C
8 LD-M(-)
7 LD-M(+)
6 CTL
5 CTL-GND
4 AE-H
3 AE-H/FE-H
2 A-COM
1 A-PB/REC
(TO MAIN CBA CN501)
CL2691
5 LD-D
4 LD-GND
3 LD-B
2 LD-A
1 LD-C
CL2691
SW2691
LOADING
SWITCH
MODE SW CBA
CL2693
3 LD-M(+)
2 LD-M(+)
1 LD-M(-)
CL2693
LOADING MOTOR
M
CL2692
6 CTL
5 CTL-GND
4 AE-H
3 AE-H/FE-H
2 A-COM
1 A-PB/REC
CN2693
CONTROL HEAD
AUDIO ERASE HEAD
AUDIO HEAD
JOINT CBA
ACE HEAD CBA

Main CBA Top View

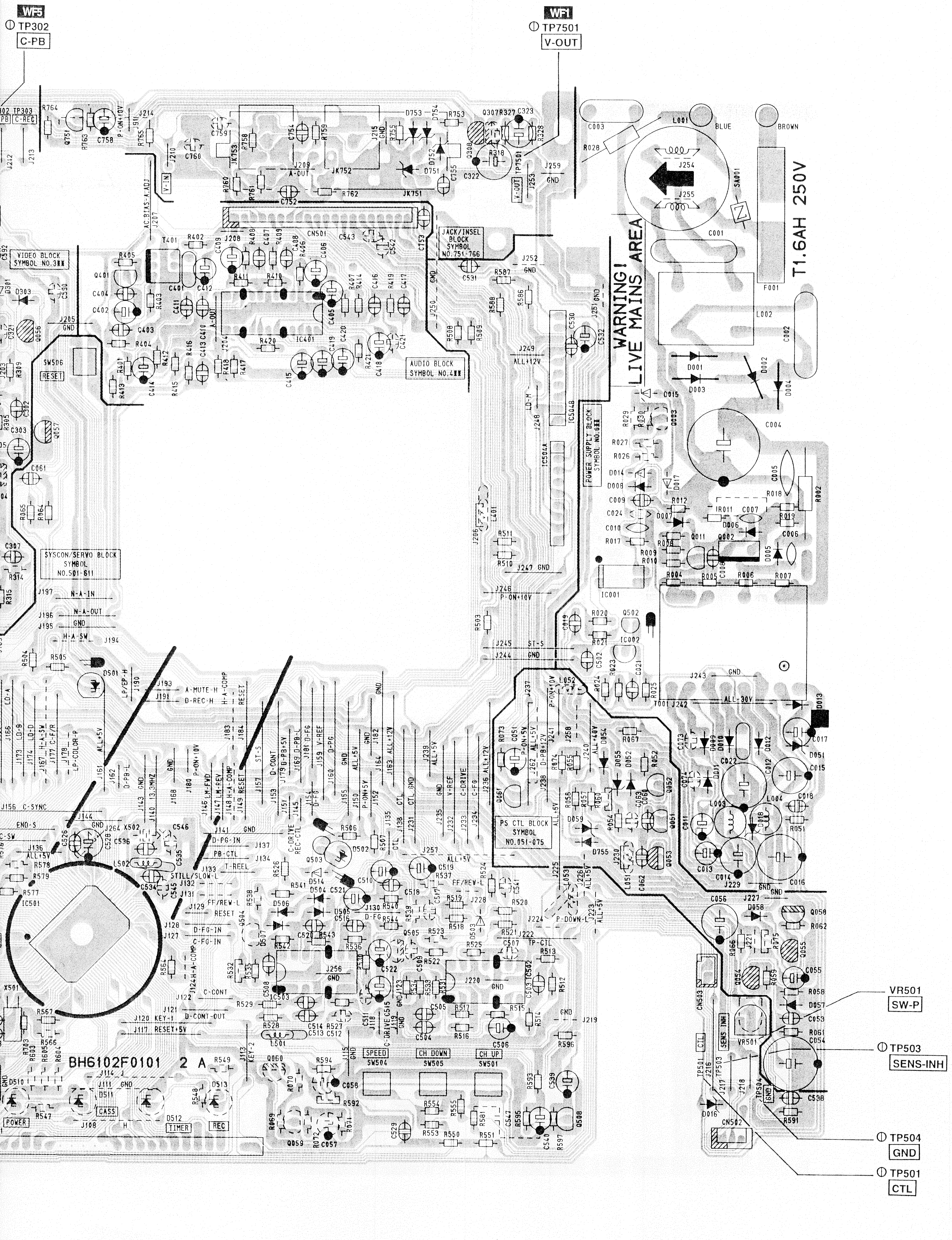
NOTE: THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED
USING HOT GND AS A COMMON TERMINAL.

CAUTION
FOR CONTINUED
REPLACE ONLY W


TP752
A-OUT
VR301
EE-LEVEL
TP301
Y-REC
WF5
TP302
C-PB
WF2
TP502
RF-SW
VIDEO BLOCK SYMBOL NO.3XX
SYSCON/SERVO BLOCK SYMBOL NO.501-611
TUNER BLOCK SYMBOL NO.7XX
OSD BLOCK SYMBOL NO.851-866
INSEL BLOCK SYMBOL NO.75X
KARAOKE BLOCK SYMBOL NO.440-469
SW502 POWER
SW503 TV/VCR
STANDBY
POWER
BH610

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.

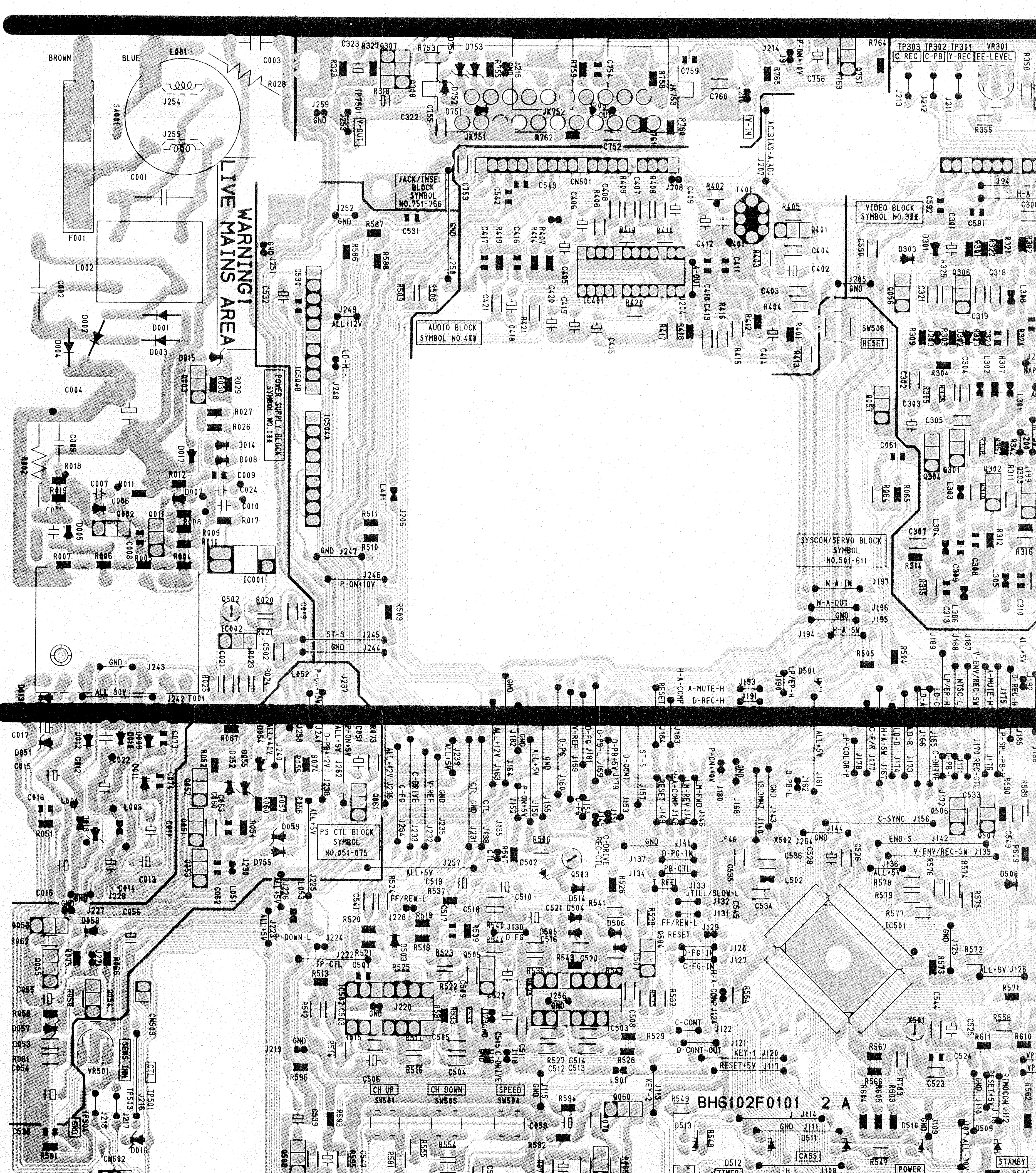
CAUTION !
Fixed or auto voltage power supply circuit is used in this unit.
If Main Fuse (F01) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.


WF5
TP302
C-PB
WF1
TP7501
V-OUT
BLUE
BROWN
T1.6AH 250V
WARNING!
LIVE MAINS AREA
JACK/INSEL BLOCK SYMBOL NO.751-766
VIDEO BLOCK SYMBOL NO.3XX
AUDIO BLOCK SYMBOL NO.4XX
POWER SUPPLY BLOCK SYMBOL NO.0XX
SYSCON/SERVO BLOCK SYMBOL NO.501-611
PS CTL BLOCK SYMBOL NO.051-075
BH6102F0101 2 A
SPEED
CH DOWN
CH UP
POWER
CASS
TIMER
REC
RESET
VR501
SW-P
TP503
SENS-INH
TP504
GND
TP501
CTL

Main CBA Bottom View

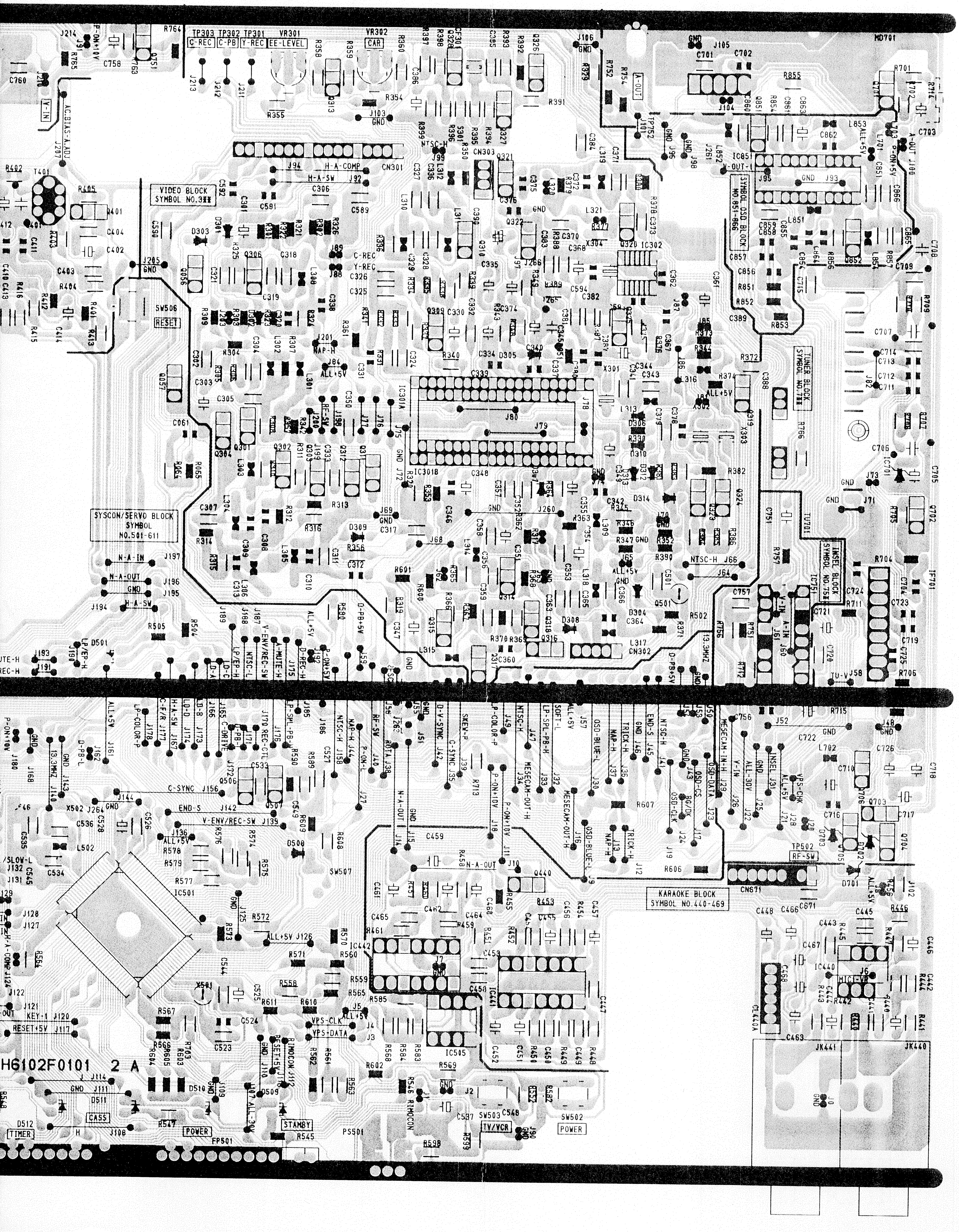
NOTE: THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING HOT GND AS A COMMON TERMINAL.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZ
REPLACE ONLY WITH THE SAME TYPE FUSE.

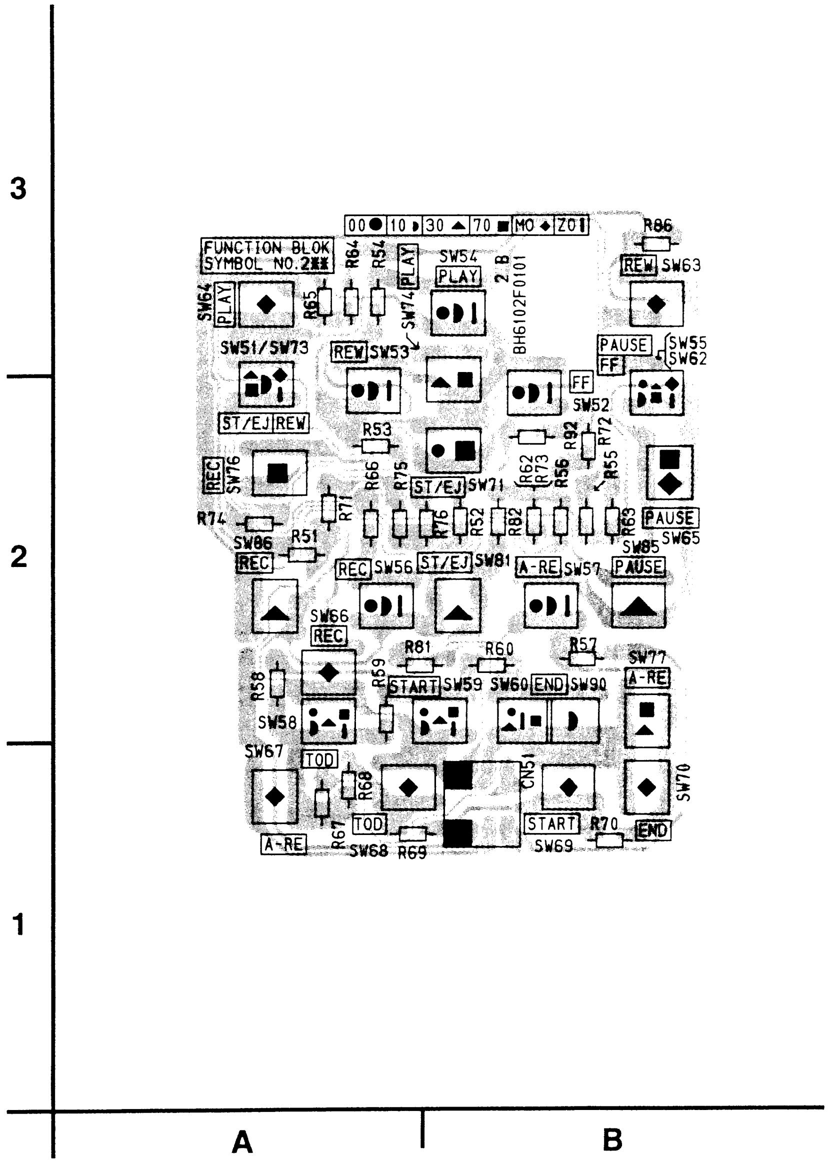

BROWN
BLUE
L001
J254
J255
SA001
C001
C003
R028
F001
L002
C002
D001
D002
D003
D004
C004
R002
WARNING!
LIVE MAINS AREA
IC001
Q502
IC002
GND
ALL-30V
J243
J242
T001
D013
JACK/INSEL BLOCK SYMBOL NO.751-766
AUDIO BLOCK SYMBOL NO.4XX
POWER SUPPLY BLOCK SYMBOL NO.0XX
VIDEO BLOCK SYMBOL NO.3XX
SYSCON/SERVO BLOCK SYMBOL NO.501-611
PS CTL BLOCK SYMBOL NO.051-075
IC5048
IC504A
IC401
JK751
JK752
JK753
CN501
T401
IC501
X501
X502
SW506
RESET
TP303 TP302 TP301 VR301
C-REC
C-PB
Y-REC
EE-LEVEL
V-OUT
V-IN
A.C.BIAS-A.ADJ.
P-ON+10V
ALL+12V
ALL+5V
ST-S
GND
N-A-IN
N-A-OUT
H-A-SW
H-A-MUTE-H
D-REC-H
A-MUTE-H
VR501
SENS INH
CTL
CN502
CN503
CH UP
SW501
CH DOWN
SW505
SPEED
SW504
TIMER
CASS
POWER
FP501
STAMBY
KEY-1
KEY-2
RESET+5V
C-CONT
D-CONT-OUT
C-SYNC
END-S
V-ENV/REC-SW
BH6102F0101 2 A

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.

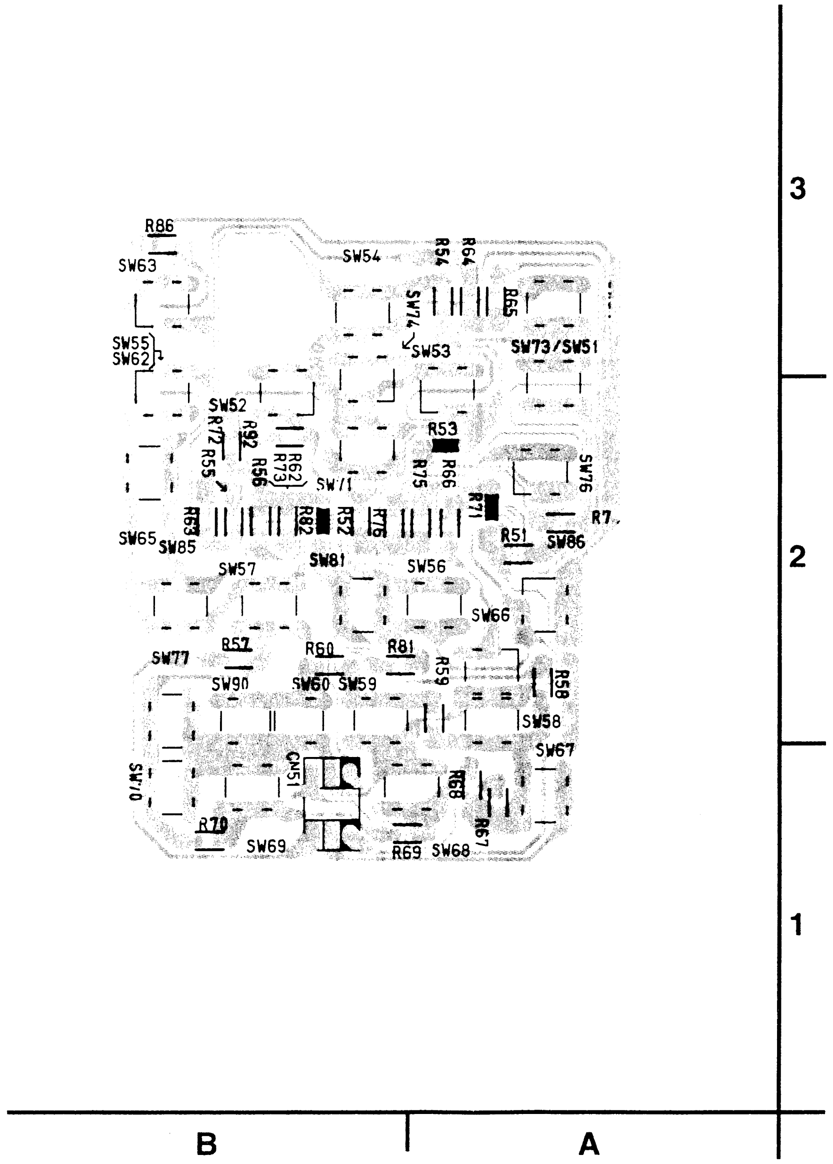
CAUTION !
Fixed or auto voltage power supply circuit is used in this unit.
If Main Fuse (F01) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.


VIDEO BLOCK SYMBOL NO.3**
SYSCON/SERVO BLOCK SYMBOL NO.501-611
SYMBOL OSD BLOCK NO.851-866
TUNER BLOCK SYMBOL NO.7**
INSEL BLOCK SYMBOL NO.75*
KARAOKE BLOCK SYMBOL NO.440-469
H6102F0101 2 A
RESET
TIMER
CASS
POWER
STAMBY
TV/VCR
POWER

Function CBA Top View

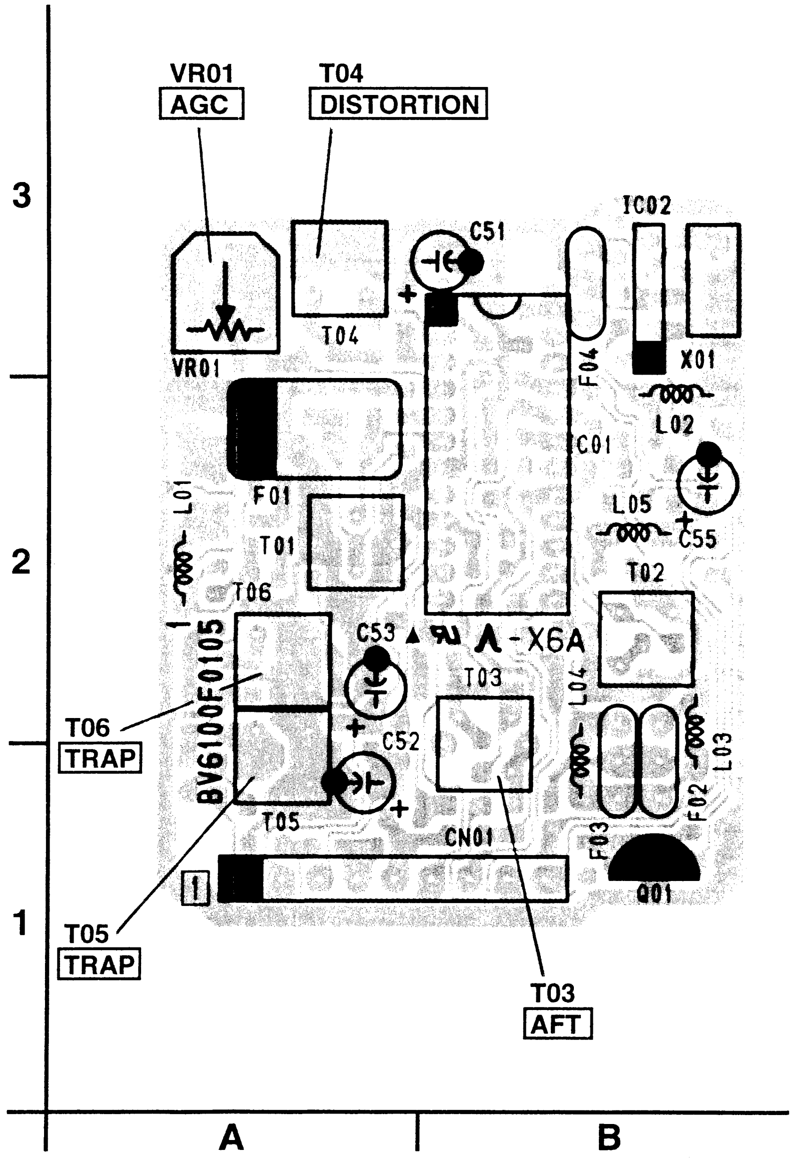

3
2
1
A
B
FUNCTION BLOK SYMBOL NO.2
00 10 30 70 MO Z01
R86
REW SW63
SW64 PLAY
R65 R64 R54 PLAY
SW54 PLAY
2 B
BH6102F0101
SW74
SW51/SW73
REW SW53
PAUSE FF SW55 SW62
FF SW52
ST/EJ REW
R53
R92 R72 R55
REC SW76
R71 R66 R75
ST/EJ SW71
R62 R73 R56
R74
R51
SW86 REC
R76 R52 R82
R63 PAUSE SW65
SW85
REC SW56
ST/EJ SW81
A-RE SW57
PAUSE
SW66 REC
R81 R60 R57
SW77 A-RE
R58
R59
START SW59 SW60 END SW90
SW58
SW67
TOD
R68
CN51
SW70
R67 TOD
R69
START R70 END
A-RE
SW68 R69
SW69

Function CBA Bottom View

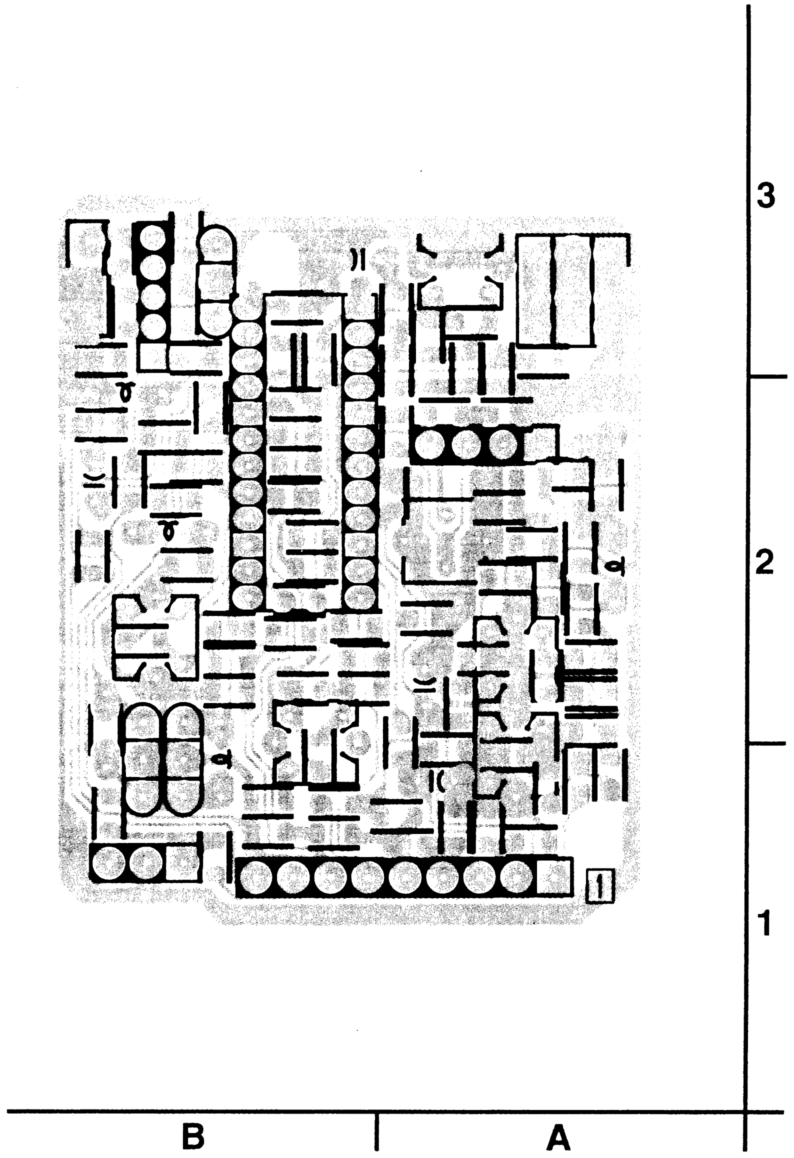

3
2
1
B
A
R86
SW63
SW54
R54 R64
R65
SW74
SW55 SW62
SW53
SW73/SW51
SW52
R72 R92
R55 R56
R62 R73
R53
R75 R66
SW71
SW76
R71
R63
R82 R52 R76
R7
R51 SW86
SW65 SW85
SW57
SW81
SW56
SW66
SW77
R57
R60
R81
R59
R58
SW90
SW60 SW59
SW58
SW67
SW70
CN51
R68
R67
R70
SW69
R69 SW68

BH6102F01012B

IF CBA Top View

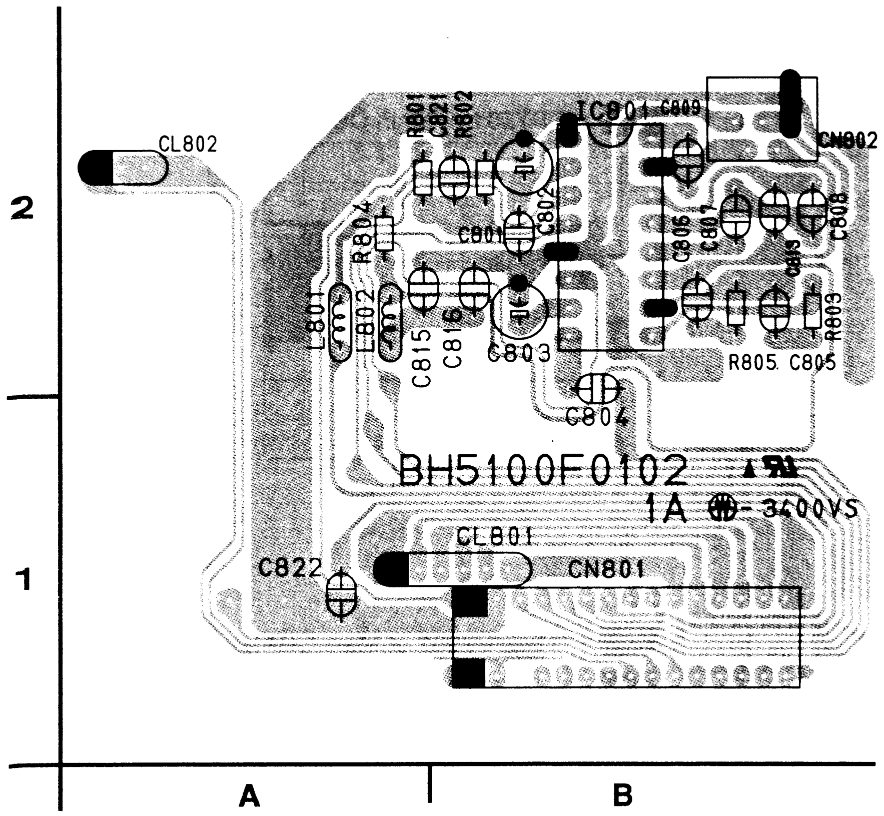

VR01
AGC
T04
DISTORTION
3
2
1
A
B
IC02
C51
T04
VR01
F04
X01
L02
IC01
F01
L01
T01
L05
C55
T02
T06
C53
X6A
T03
L04
L03
T06
TRAP
BV6100F0105
C52
F02
F03
T05
CN01
Q01
T05
TRAP
T03
AFT

IF CBA Bottom View

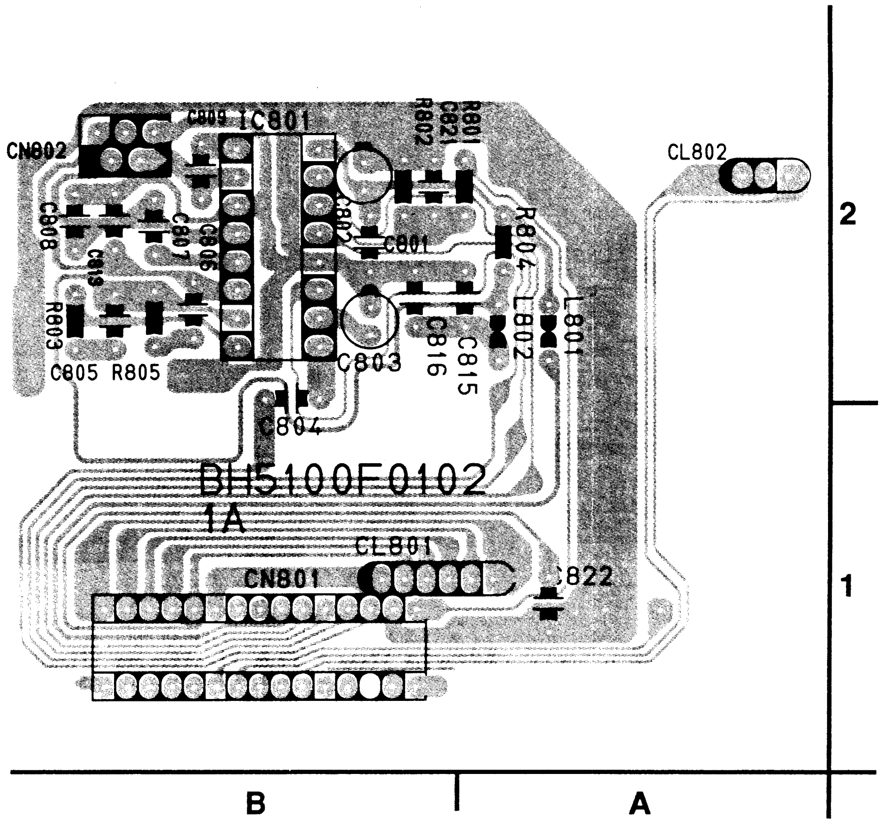


BV6100F01051

Head Amp CBA Top View (A, B)


CL802
R801
C821
R802
IC801
C809
CN802
C802
C801
R804
L801
L802
C815
C816
C803
C806
C807
C819
C808
R803
R805
C805
C804
BH5100F0102
1A
3400VS
C822
CL801
CN801
2
1
A
B

Head Amp CBA Bottom View (A, B)


CN802
C809
IC801
R802
C821
R801
CL802
C808
C807
C806
C819
C802
C801
R804
L801
L802
R803
C805
R805
C803
C816
C815
C804
BH5100F0102
1A
CL801
CN801
C822
2
1
B
A

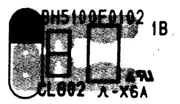
BH5100F0102-1A

Comparison Chart of Models and Marks

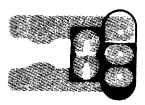
MODEL	MARK	MODEL	MARK
13A-109	A	13A-509	C
13A-129	B	13A-529	D

Note: There are two types of FE head CBAs and three types of FE heads. Combinations are made clear in Deck electrical parts list. As long as the combination is correct, all the three types of FE heads are interchangeable.

FE Head CBA Top View (TYPE B) (A, B)

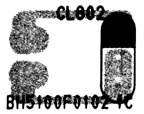

BH5100F0102
1B
CL802
A-X6A

FE Head CBA Bottom View (TYPE B) (A, B)

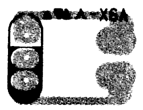


BH5100F0102-1B

FE Head CBA Top View (TYPE C) (A, B)

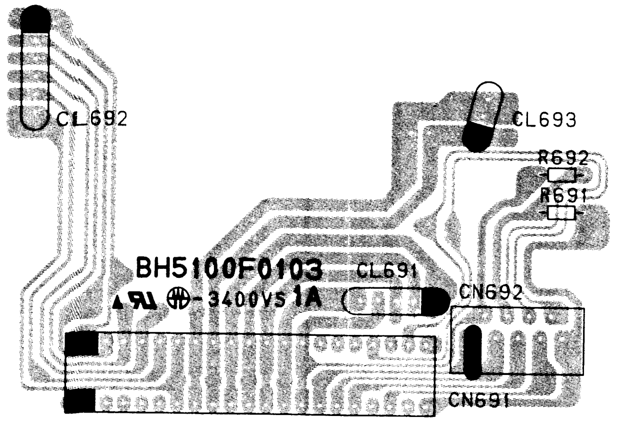

CL802
BH5100F0102-1C

FE Head CBA Bottom View (TYPE C) (A, B)

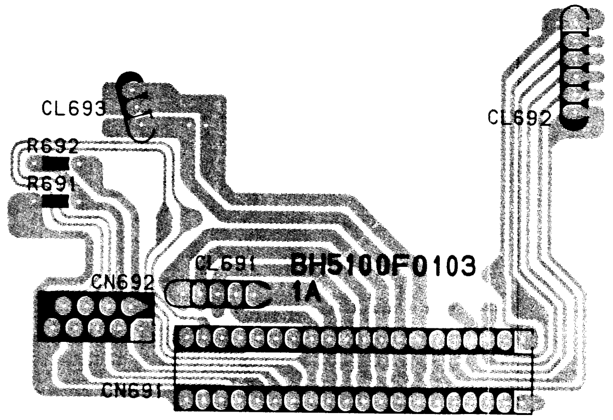


BH5100F0102-1C

Joint CBA Top View

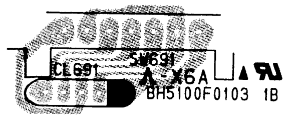

CL692
CL693
R692
R691
BH5100F0103
CL691
3400VS 1A
CN692
CN691

Joint CBA Bottom View

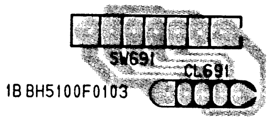

CL693
R692
R691
CL692
CN692
CL691
BH5100F0103
1A
CN691

BH5100F0103-1A

Mode Sw CBA Top View

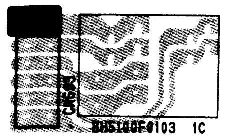

SW691
CL691
X6A
BH5100F0103 1B

Mode Sw CBA Bottom View

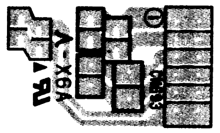

SW691
CL691
1B BH5100F0103

BH5100F0103-1B

Ace Head CBA Top View


BH5100F0103 1C

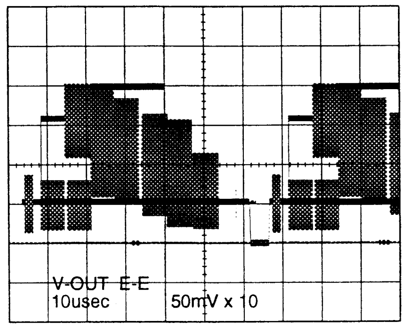
Ace Head CBA Bottom View



BH5100F0103-1C

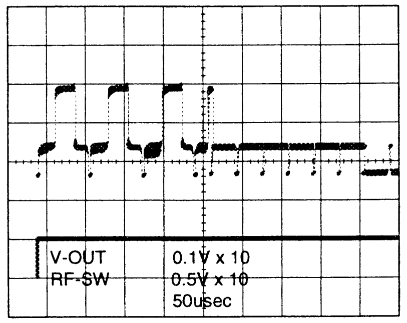
WAVEFORMS

WF 1 (TP7501 of Main CBA)



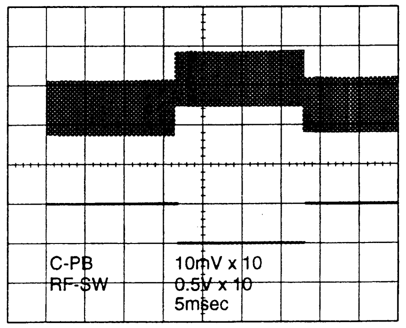
WF1 UPPER (TP7501 of Main CBA)

WF2 LOWER (TP502 of Main CBA)

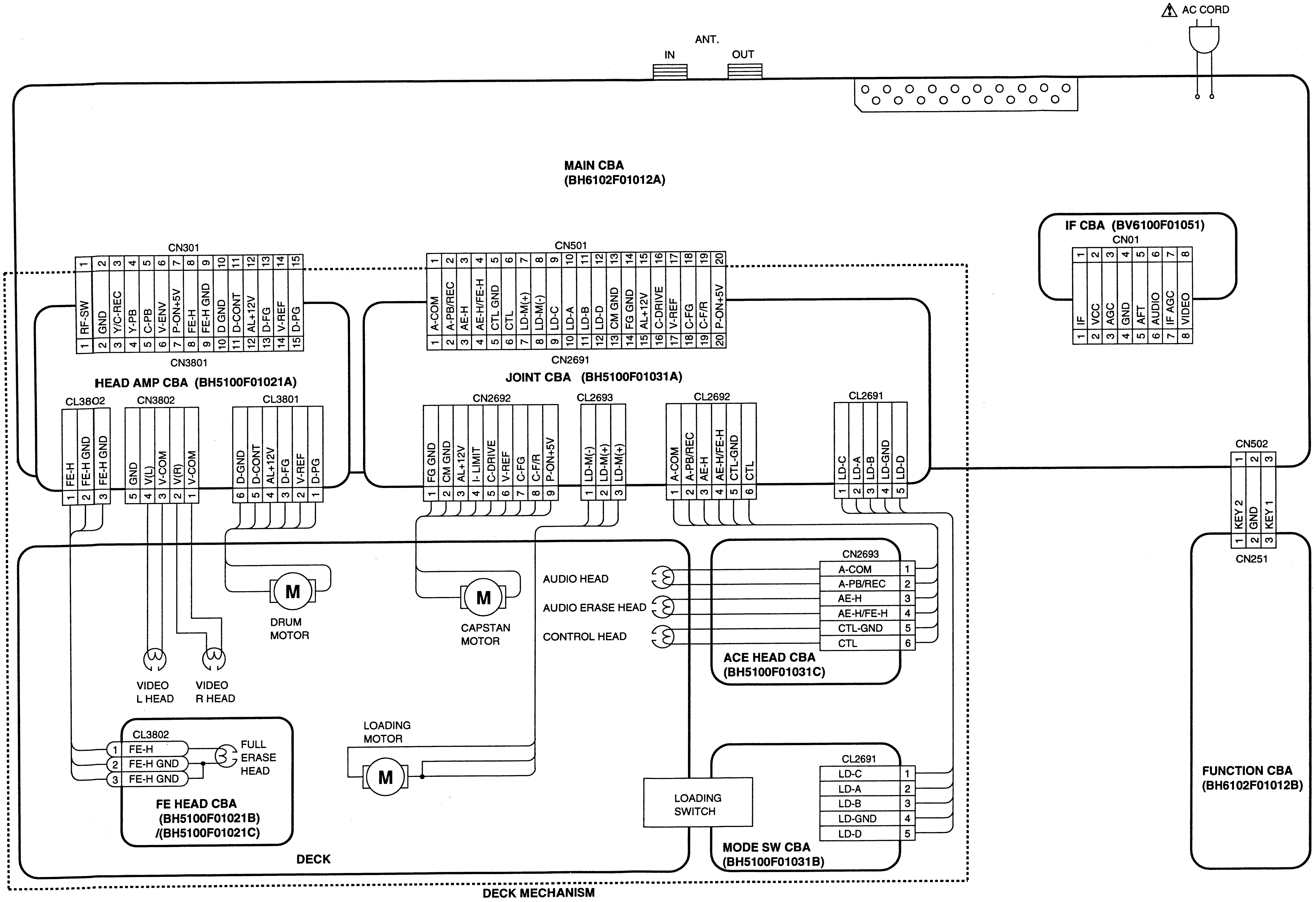


WF5 UPPER (TP302 of Main CBA)

WF2 LOWER (TP502 of Main CBA)



WIRING DIAGRAM


AC CORD
ANT.
IN
OUT
MAIN CBA
(BH6102F01012A)
IF CBA (BV6100F01051)
CN01
1 IF
2 VCC
3 AGC
4 GND
5 AFT
6 AUDIO
7 IF AGC
8 VIDEO
CN301
CN3801
1 RF-SW
2 GND
3 Y/C-REC
4 Y-PB
5 C-PB
6 V-ENV
7 P-ON+5V
8 FE-H
9 FE-H GND
10 D GND
11 D-CONT
12 AL+12V
13 D-FG
14 V-REF
15 D-PG
HEAD AMP CBA (BH5100F01021A)
CN501
CN2691
1 A-COM
2 A-PB/REC
3 AE-H
4 AE-H/FE-H
5 CTL GND
6 CTL
7 LD-M(+)
8 LD-M(-)
9 LD-C
10 LD-A
11 LD-B
12 LD-D
13 CM GND
14 FG GND
15 AL+12V
16 C-DRIVE
17 V-REF
18 C-FG
19 C-F/R
20 P-ON+5V
JOINT CBA (BH5100F01031A)
CL3802
1 FE-H
2 FE-H GND
3 FE-H GND
CN3802
5 GND
4 V(L)
3 V-COM
2 V(R)
1 V-COM
CL3801
6 D-GND
5 D-CONT
4 AL+12V
3 D-FG
2 V-REF
1 D-PG
CN2692
1 FG GND
2 CM GND
3 AL+12V
4 I-LIMIT
5 C-DRIVE
6 V-REF
7 C-FG
8 C-F/R
9 P-ON+5V
CL2693
1 LD-M(-)
2 LD-M(+)
3 LD-M(+)
CL2692
1 A-COM
2 A-PB/REC
3 AE-H
4 AE-H/FE-H
5 CTL-GND
6 CTL
CL2691
1 LD-C
2 LD-A
3 LD-B
4 LD-GND
5 LD-D
CN502
CN251
1 KEY 2
2 GND
3 KEY 1
M
DRUM
MOTOR
M
CAPSTAN
MOTOR
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
CN2693
A-COM 1
A-PB/REC 2
AE-H 3
AE-H/FE-H 4
CTL-GND 5
CTL 6
ACE HEAD CBA
(BH5100F01031C)
VIDEO
L HEAD
VIDEO
R HEAD
CL3802
1 FE-H
2 FE-H GND
3 FE-H GND
FULL
ERASE
HEAD
FE HEAD CBA
(BH5100F01021B)
/(BH5100F01021C)
LOADING
MOTOR
M
LOADING
SWITCH
CL2691
LD-C 1
LD-A 2
LD-B 3
LD-GND 4
LD-D 5
MODE SW CBA
(BH5100F01031B)
DECK
DECK MECHANISM
FUNCTION CBA
(BH6102F01012B)

SYSTEM CONTROL TIMING CHARTS

Mode SW : LD-A/LD-B/LD-C/LD-D

LD-SW				Symbol	
LD-A	LD-B	LD-C	LD-D		
L	H	H	H	EJ	Eject
H	H	H	H	CL	REW Reel
L	L	H	H	SB	Stop (B)
H	L	H	H	TL	Brake Cancel
H	L	L	H	FB	
H	H	L	H	SF	FF / REW, Stop (A)
H	H	L	L	AU	
H	H	H	L	AL	Play / REC (FS Pause 2 Head Still)
H	H	H	H	GC	Capstan Reversal
L	H	H	L	RS	RS (REV Reel)

Note:

EJ—— RS : Loading FWD (LM-FWD "H", LM-REW "L")

RS—— EJ : Loading REV (LM-FWD "L", LM-REW "H")

Stop (A) = Loading

Stop (B) = Unloading

Note :

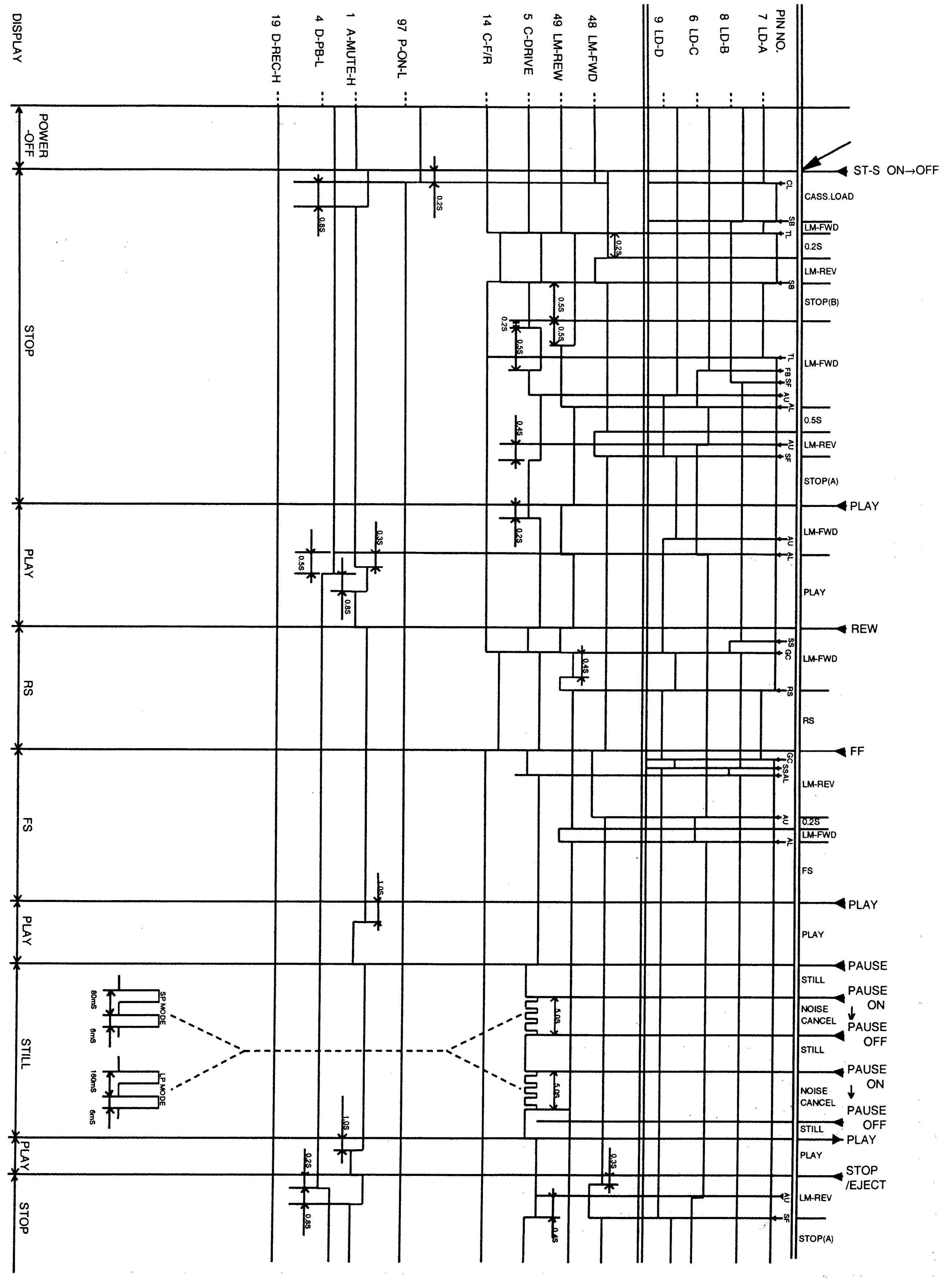
Symbol	Loading Status
EJ	Eject
CL	Eject ~ Loading Completion
SB	REW ~ Stop(B)
TL	Stop(B) ~ Brake Cancel
FB	Brake Cancel ~ FF / REW
SF	FF / REW ~ Stop(A)
AU	Stop(A) ~ Play / REC
AL	Play / REC ~ 4 Head Still / Slow
SS	4 Head Still / Slow ~ Capstan Reversal
GC	Capstan Reversal ~ REW Reel
RS	RS (REV)

Loading Motor/Control

LM-FWD	LM-REW	Description
H	H	Stop
H	L	Loading Forward Rotation
L	H	Loading Reverse Rotation

Capstan Motor/Control

C-DRIVE	C-F/R	Description
L	L/H	Stop, The brake is not applied.
H or HI-Z	L	Capstan, Reel Forward Rotation
H or HI-Z	H	Capstan, Reel Reverse Rotation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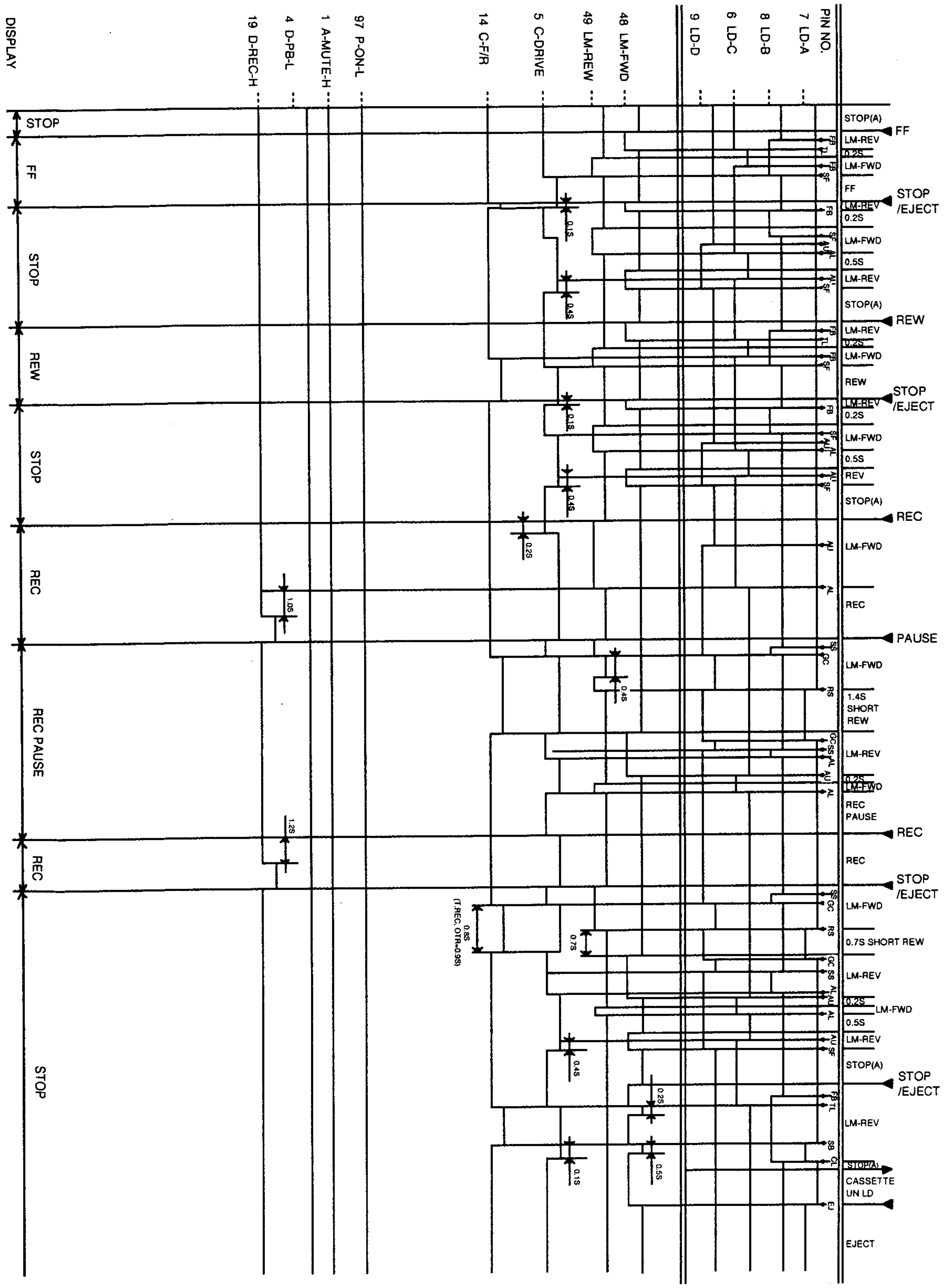
7 LD-A
8 LD-B
6 LD-C
9 LD-D
48 LM-FWD
49 LM-REW
5 C-DRIVE
14 C-F/R
97 P-ON-L
1 A-MUTE-H
4 D-PB-L
19 D-REC-H
DISPLAY
POWER -OFF
STOP
PLAY
RS
FS
PLAY
STILL
PLAY
STOP
ST-S ON→OFF
CASS.LOAD
LM-FWD
0.2S
LM-REV
STOP(B)
LM-FWD
0.5S
LM-REV
STOP(A)
PLAY
LM-FWD
PLAY
REW
LM-FWD
RS
FF
LM-REV
0.2S
LM-FWD
FS
PLAY
PLAY
PAUSE
STILL
PAUSE ON
NOISE CANCEL
PAUSE OFF
STILL
PAUSE ON
NOISE CANCEL
PAUSE OFF
STILL
PLAY
PLAY
STOP /EJECT
LM-REV
STOP(A)
SP MODE
LP MODE
80mS
6mS
160mS
6mS


PIN NO.
7 LD-A
8 LD-B
6 LD-C
9 LD-D
48 LM-FWD
49 LM-REW
5 C-DRIVE
14 C-F/R
97 P-ON-L
1 A-MUTE-H
4 D-PB-L
19 D-REC-H
DISPLAY
STOP
FF
STOP
REW
STOP
REC
REC PAUSE
REC
STOP
FF
STOP /EJECT
REW
STOP /EJECT
REC
PAUSE
REC
STOP /EJECT
STOP /EJECT
STOP(A)
LM-REV
0.2S
LM-FWD
FF
LM-REV
0.2S
LM-FWD
0.5S
LM-REV
STOP(A)
LM-REV
0.2S
LM-FWD
REW
LM-REV
0.2S
LM-FWD
0.5S
REV
STOP(A)
LM-FWD
REC
LM-FWD
1.4S SHORT REW
LM-REV
0.2S
LM-FWD
REC PAUSE
REC
LM-FWD
0.7S SHORT REW
LM-REV
0.2S
LM-FWD
0.5S
LM-REV
STOP(A)
LM-REV
STOP(A)
CASSETTE UN LD
EJECT
FB
TL
SF
AU
AL
SS
CC
RS
SB
CL
EJ
0.1S
0.4S
0.1S
0.4S
0.2S
1.0S
0.4S
1.2S
0.8S (T.REC, OTR=0.9S)
0.7S
0.4S
0.2S
0.5S
0.1S

IC PIN FUNCTION DESCRIPTION

IC501 (SERVO / SYSTEM CONTROL IC)

"H" ≥ 4.5V, "L" ≤ 1.0V

Pin No.	IN/ OUT	Signal Name	Function	Active Level
1	OUT	A-MUTE-H	Audio Mute Signal Output	H
2	OUT	LP-SPL-PB-H	Special Effects Playback LP mode = " H " Output	H
3	OUT	REC-CTL	REC-CTL	H/L
4	OUT	D-PB-L	D-PB Output	L
5	OUT	C-DRIVE	Capstan Drive Output	H/Hi-Z
6	IN	LD-C	Loading SW C Input	H/L
7	IN	LD-A	Loading SW A Input	H/L
8	IN	LD-B	Loading SW B Input	H/L
9	IN	LD-D	Loading SW D Input	H/L
10	-	N.U.	Not used	-
11	-	N.U.	Not used	-
12	OUT	ROTA	ROTA Output	H/L
13	OUT	RF-SW	RF-SW Output	H/L
14	OUT	C-F/R	Capstan F/R Output	H/L
15	-	N.U.	Not used(GND)	-
16	-	N.U.	Not used	-
17	OUT	D-V SYNC	Dummy V-Sync Output	H/Hi-Z
18	OUT	SD-L	Not used(GND)	L
19	OUT	D-REC-H	D-REC Output	H
20	OUT	LP-H	LP-H Output	H
21	OUT	NTSC-L	Not used	L
22	IN	AFC	Tuner AFC Voltage Input	A/D
23	IN	V-ENV/REC-SW	Video ENV./REC-SAF-SW Input	A/D
24	IN	END-S	Tape END Position Detect	A/D
25	IN	ST-S	Tape Start Position Detect	A/D
26	IN	DEW	Not used(GND)	A/D
27	IN	KEY IN-2	A/D Key Data Input	A/D
28	-	AV$_{REF}$	AV$_{REF}$ A/D Converter Standard Voltage Input (ALL 5V)	-
29	-	AV$_{SS}$	AV$_{SS}$ A/D for Converter Power (GND)	-
30	-	AV$_{DD}$	AV$_{DD}$ A/D for Converter Power (Back Up 5V)	-
31	IN	KEY IN-1	A/D Key Data Input	A/D
32	IN	PG-DELAY/ TEST	PG-DELAY	A/D
33	-	N.U.	Not used	-
34	IN	T-REEL	Take Up Reel Rotation Signal Input	PULSE
35	IN	P-DOWN-L	Power Down Detection Input	L
36	IN	C-SYNC	C-SYNC Input	PULSE
37	IN	PB-CTL	PB-CTL Input	PULSE
38	IN	D-PG	D-PG Input	PULSE
39	-	MP	GND	-
40	IN	RESET	System Reset	L
41	-	V$_{SS}$	V$_{SS}$ (GND)	-
42	-	XTAL	Main Clock 13.300857MHz(IN)	-
43	-	EXTAL	Main Clock	-
44	IN	D-FG	D-FG Input	PULSE
45	IN	C-FG	C-FG Input	PULSE
46	-	N.U.	Not used	L
47	OUT	FF/REW-L	Not used	L
48	OUT	LM-FWD	Loading Motor FWD Output	H
49	OUT	LM-REV	Loading Motor REV Output	H
50	OUT	C-CONT	Capstan Control	PWM
51	OUT	D-CONT	Drum Control	PWM
52	-	N.U.	Not used(GND)	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
53	-	N.U.	Not used(GND)	H/L
54	OUT	G1	Display Digit Output	H
55	OUT	G2	Display Digit Output	H
56	OUT	G3	Display Digit Output	H
57	OUT	G4	Display Digit Output	H
58	OUT	G5	Display Digit Output	H
59	OUT	G6	Display Digit Output	H
60	OUT	G7	Display Digit Output	H
61	OUT	G8	Display Digit Output	H
62	OUT	G9	Display Digit Output	H
63	OUT	G10	Display Digit Output	H
64	OUT	A	Display Segment Output	H
65	OUT	B	Display Segment Output	H
66	OUT	C	Display Segment Output	H
67	OUT	D	Display Segment Output	H
68	OUT	E	Display Segment Output	H
69	OUT	F	Display Segment Output	H
70	OUT	G	Display Segment Output	H
71	OUT	H	Display Segment Output	H
72	OUT	I	Display Segment Output	H
73	OUT	J	Display Segment Output	H
74	-	N.U.	Not used	-
75	-	N.U.	Not used	-
76	-	N.U.	Not used	-
77	OUT	NAP-H	Not used	H
78	-	V_{FDP} (-28V)	V_{FDP} (-28V)	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
79	-	N.U.	Not used	-
80	-	N.U.	Not used(+5V)	-
81	-	N.U.	Not used(+5V)	-
82	IN	MESECAM -IN-H	Not used(+5V)	H/L
83	OUT	MESECAM - OUT-H	Not used	H
84	OUT	T-DAC	TUNING Voltage Control for PWM Output	PWM
85	IN	REMOCON	Remocon Sensor Input	L
86	-	TEX	Sub Clock 32KHz (IN)	-
87	-	TX	Sub Clock 32KHz (OUT)	-
88	-	V_{SS}	V_{SS}(GND)	-
89	-	V_{DD}	V_{DD}(BACK UP 5V)	-
90	-	Vpp	BACK UP 5V	-
91	IN/ OUT	VPS/ E2PROM-DATA	E2PROM IC Control Data	H/L
92	OUT	VPS/ E2PROM-CLK	E2PROM IC Control Clock	H/L
93	OUT	D/I	Not used(GND)	H
94	OUT	VL	TUNER BAND Switching Output	L
95	OUT	VH	TUNER BAND Switching Output	L
96	OUT	U	TUNER BAND Switching Output	L
97	OUT	P-ON-L	P-ON Output	L
98	OUT	INSEL	Input Select	H/L
99	OUT	VPS-CHECK	Not used	H
100	OUT	NTSC-REC-H	Not used	H

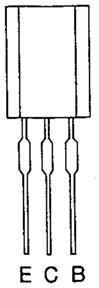
Notes:

Abbreviation for Active Level

PWM – Pulse Wide Modulation,

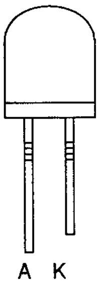
A/D -- Analog - Digital Converter

LEAD IDENTIFICATION



2SA608SP(E,F)
2SC536SP(E,F)
2SC3400
2SC2839(E,F)
KRC103M
KSR2205
2SA1654
KSR2203
KSR2208
2SA1347
KRA103M
KRC106M
KSR1214
2SC4133

KSR1203
KTA1267(Y,GR)
KSA1175(Y,G)
KTC3199(Y,GR)
KSC2785(Y,G)
KTA1266(Y,GR)
2SA1317(S,T)
2SD400(F)
KTC3193(Y)
KRA109M
2SA1346



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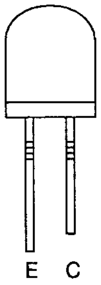
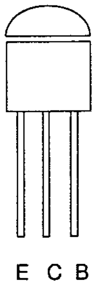
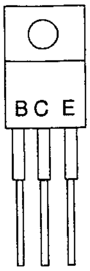
SLR-932C-20-AB
SID1K10CXM
LN66A.FN
SLR-981(A,B,C)

ST-316R2-B



2SC2120-Y
2SD734G-NP-AQ
2SD734F-NP-AQ
KTC3203(Y)
2SC4204
2SC3576
2SC3331(T,U)





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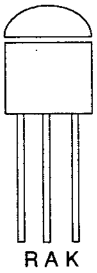
2SC5239



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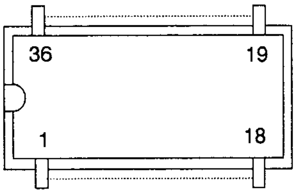
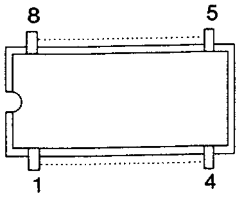
KA431Z
AN1431T-(NSC)
L5431

LA7347

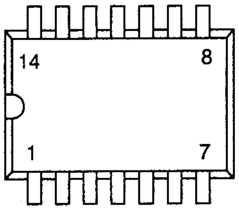


ST24C02A-B1
24LC02B/P
X24C02P

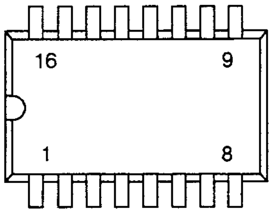


LC89975M
KA339
KIA339P

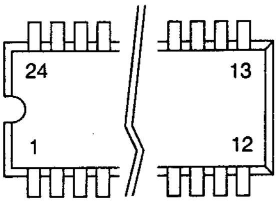
KA324
KIA324P
NJM2901N



NJU4052BD
µPD4052BC
TC4052BP
HEF4052BP



LA7286
LA7578N



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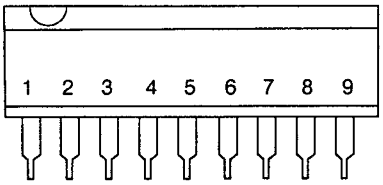
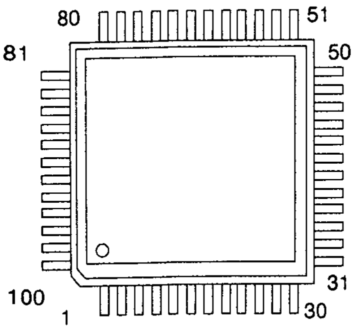
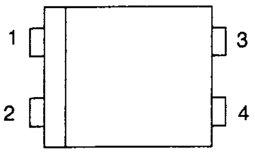


Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference

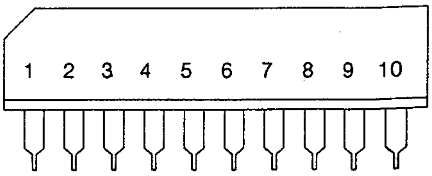
QSMQA0RSN051
QSMQB0RSN051


80
51
81
50
100
1
31
30

PC123F
PC123
PC120F
PC120
PS2561(1M,1D,1H,1W)



LB1641


1 2 3 4 5 6 7 8 9 10

DECK MECHANISM SECTION

VIDEO CASSETTE RECORDER

SVC 569

Sec. 2: Deck Mechanism Section

- **Standard Maintenance**
- **Alignment for Mechanism**
- **Disassembly/Assembly of Mechanism**
- **Front Loading Assembly**
- **Alignment Procedures of Mechanism**

TABLE OF CONTENTS

Standard Maintenance 2-1-1
Service Fixtures and Tools 2-2-1
Mechanical Alignment Procedures 2-3-1
Disassembly / Assembly Procedures of Deck Mechanism 2-4-1
Front Loading Assembly 2-4-9
Alignment Procedures of Mechanism 2-4-12

STANDARD MAINTENANCE

Service Schedule of Components

H: Hours ○: Check ●: Change

Deck		Periodic Service Schedule			
Ref. No.	Part Name	1,000 H	2,000 H	3,000 H	4,000 H
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor			●	
B6	Pinch Roller Arm Assembly		●		●
B8	Pulley Assembly		●		●
B21	Loading Belt		●		●
B27	Band Brake Assembly		●		●
B28	Main Brake S Assembly		●		●
B29	Main Brake T Assembly		●		●
B30	T Brake Arm Assembly		●		●
B31	ACE Head Assembly			●	
B32, B339	Reel Base Assembly			●	
B37	Capstan Motor		●		●
B52	Capstan Belt		●		●
B54	Ground Brush Assembly			●	
B73	FE Head CBA				
B132	Clutch Assembly		●		●
B133	Arm Idler Assembly		●		●

Note:

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.

Cleaning

Cleaning of Video Head

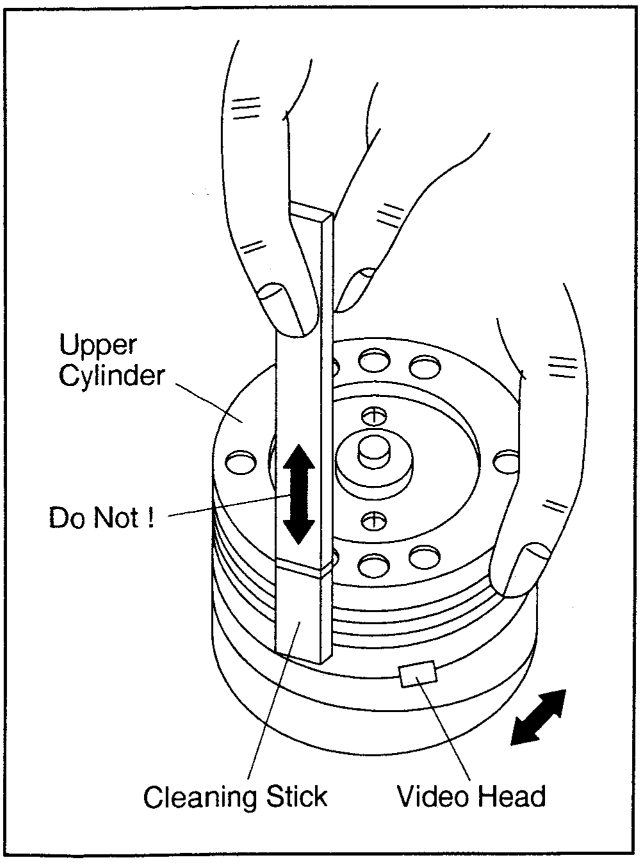
Clean the head with a head cleaning stick or chamois skin.

Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois skin and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois skin.



Cleaning of Audio Control Head

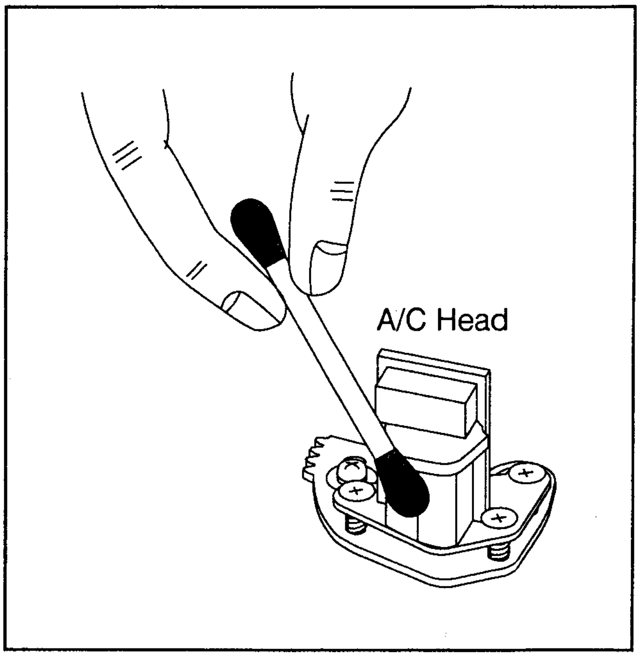
Clean the head with a cotton swab.

Procedure

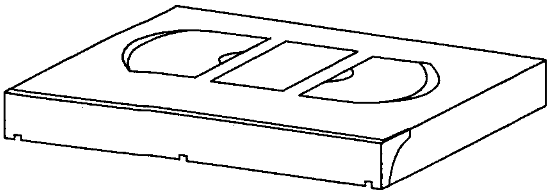
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

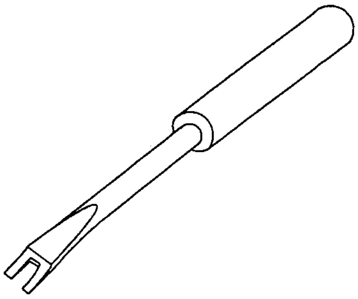
1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



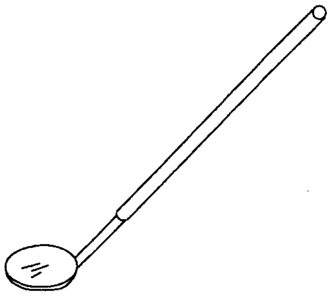
SERVICE FIXTURE AND TOOLS



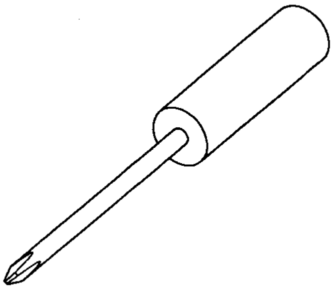
J-1-1/ J-1-2



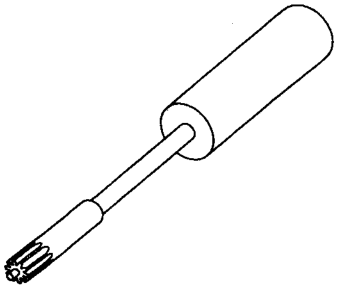
J-2



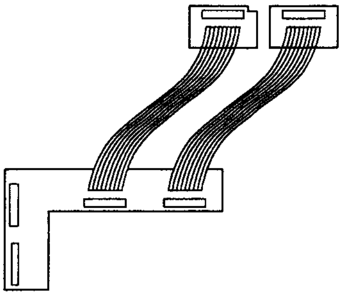
J-3



J-4



J-5



J-6

Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL6A	Electrical Adjustments
J-1-2	Alignment Tape	FL6N8 (1speed only) FL6NS8 (2speed only)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Special Driver, Small	FSJ-0006	Guide Roller
J-3	Mirror	FSJ-0004	Tape Transportation Check
J-4	Azimuth: Screwdriver	Available Locally	A/C Head Height
J-5	X Vaiu Adj. Screwdriver	FSJ-0007	X Value Adjustment
J-6	Deck Extention Cable	N1091XA	All Mechanical and Electrical Adjustments

Note:

Before starting any adjustment, take the Deck Assembly out of the cabinet and use J-6 to connect the Deck Assembly with the Main CBA.

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Cover.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 until the cassette tape is fully loaded. By turning the Pulley Assembly, you are turning the cam indicated in this figure. However, movement of the cam will be very slow. Allow a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 to unload the cassette tape. When turning the Pulley Assembly, please be aware that this is a long process and the cassette will not start getting unloaded instantaneously. Within this long process, before the cassette actually starts getting unloaded, there is a time period during which the moving guide assemblies slide back to their original positions shown in Fig. M1. However, the tape will be left wound around the cylinder. To put the tape back into the cassette, gently turn the Capstan Motor in the direction shown in Fig. M2. Make sure that the tape is completely placed back in the cassette before the cassette starts getting unloaded. Otherwise the tape hanging out will be caught and damaged by the lid of the cassette when it closes.
   By turning the Pulley Assembly, you are turning the cam indicated in Fig. M1. As stated, movement of the cam will be very slow. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

Top View

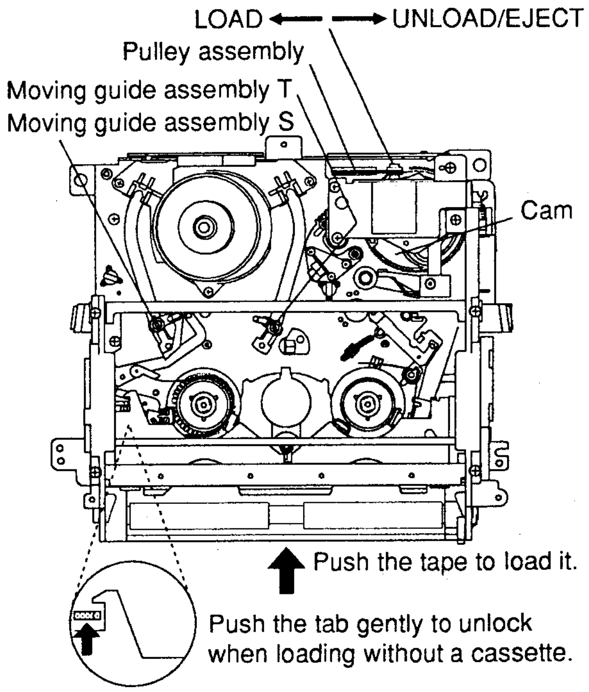

LOAD ← → UNLOAD/EJECT
Pulley assembly
Moving guide assembly T
Moving guide assembly S
Cam
Push the tape to load it.
Push the tab gently to unlock when loading without a cassette.

Fig. M1

Bottom View

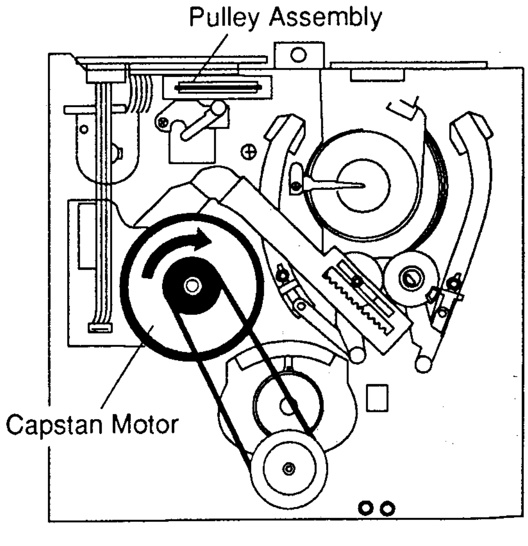


Fig. M2

1. Tape Interchangeability Alignment

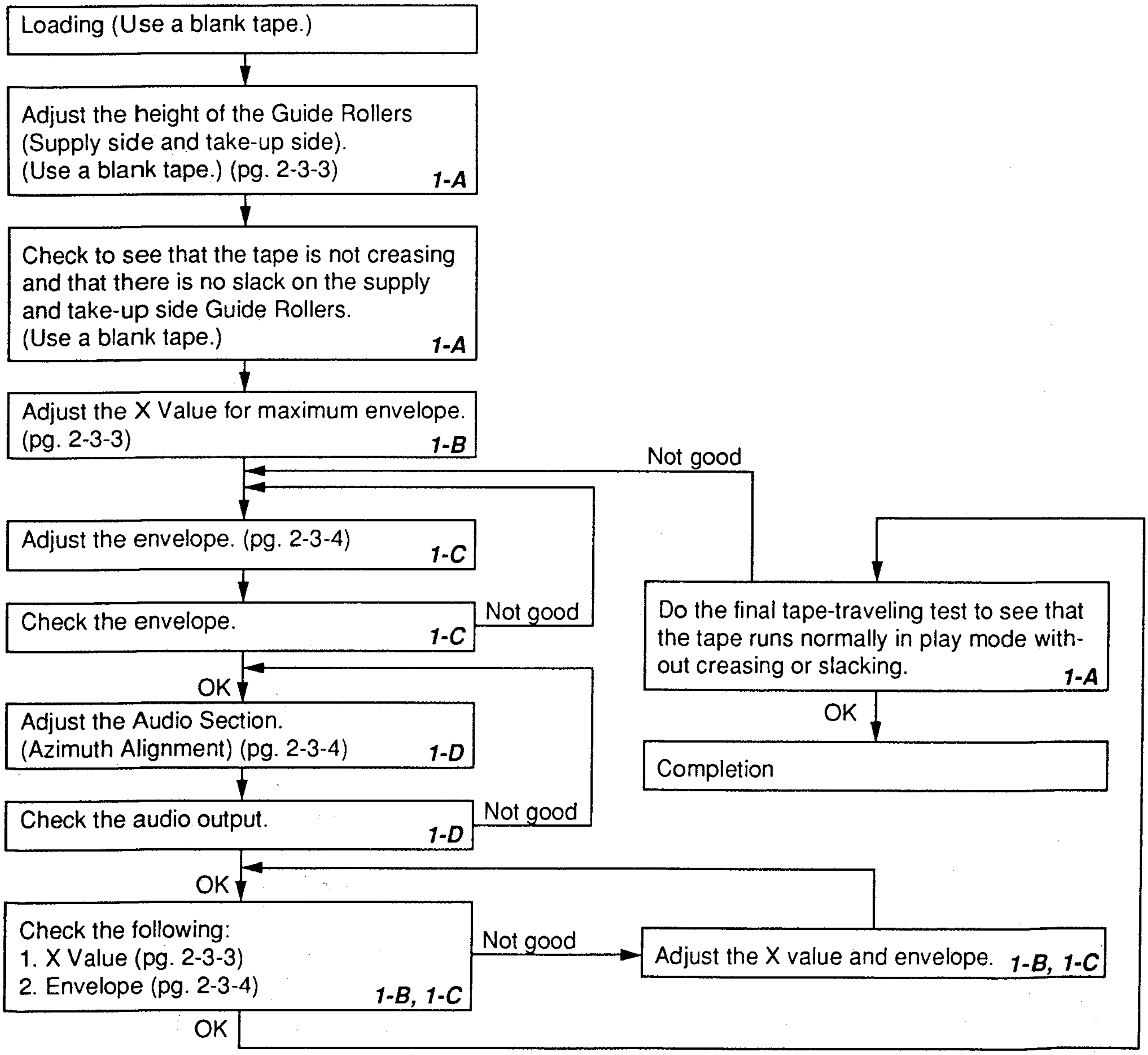
Note: To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 1.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL6NS8)
Guide Roller Adj. Screwdriver
X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling


Loading (Use a blank tape.)
Adjust the height of the Guide Rollers (Supply side and take-up side). (Use a blank tape.) (pg. 2-3-3) 1-A
Check to see that the tape is not creasing and that there is no slack on the supply and take-up side Guide Rollers. (Use a blank tape.) 1-A
Adjust the X Value for maximum envelope. (pg. 2-3-3) 1-B
Not good
Adjust the envelope. (pg. 2-3-4) 1-C
Check the envelope. 1-C
Not good
OK
Adjust the Audio Section. (Azimuth Alignment) (pg. 2-3-4) 1-D
Check the audio output. 1-D
Not good
OK
Check the following:
1. X Value (pg. 2-3-3)
2. Envelope (pg. 2-3-4) 1-B, 1-C
Not good
Adjust the X value and envelope. 1-B, 1-C
OK
Do the final tape-traveling test to see that the tape runs normally in play mode without creasing or slacking. 1-A
OK
Completion

1-A. Preliminary/Final Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

Symptom of Misalignment:

If the tape runs unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Play back a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)
   Note: Beneath each Guide Roller, there is a small screw. (Refer to Fig. M5.) This screw works to apply adequate torque to the shaft of each Guide Roller so that the Guide Roller turns properly. Even when adjusting the height of the Guide Roller(s), do not touch these two small screws.

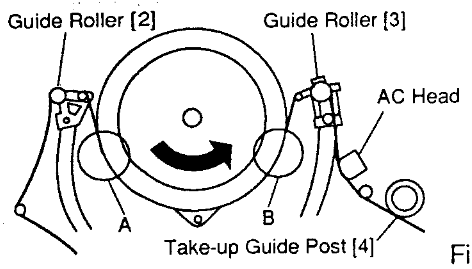


Fig. M3

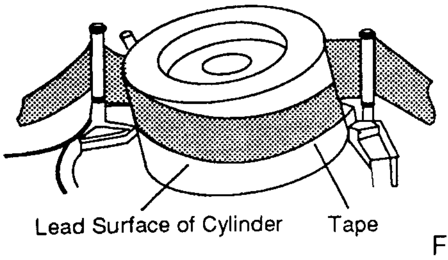


Fig. M4

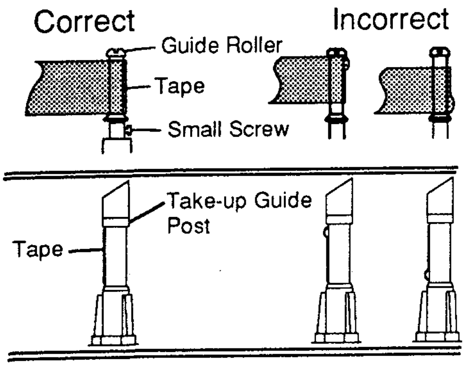


Fig. M5

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)

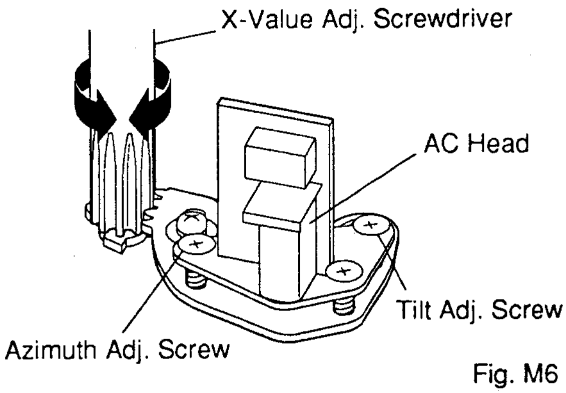


Fig. M6

1-B. X Value Alignment

Purpose:

To align the Horizontal Position of the Audio/Control Head.

Symptom of Misalignment:

If the Horizontal Position of the Audio/Control Head is not properly aligned, maximum envelope cannot be obtained at the Neutral position of the Tracking Control Circuit.

1. Set the Tracking Control Circuit to the center position by pressing CH UP and DOWN buttons on VCR simultaneously. (Refer to note on page 2-3-4.)
2. Connect the oscilloscope to TP (C-PB) and TP (CTL) on the Main CBA. Use TP (RF-SW) as a trigger.
3. Play back the Gray Scale of the Alignment Tape (FL6NS8) and confirm that the PB FM signal is present.
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP (C-PB) or TP of AUDIO OUT is maximum. (Fig.M6)
5. Press CH UP button on VCR until CTL waveform is shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.
6. Press CH DOWN button on VCR until CTL waveform is shifted from its original position (not the po-

sition achieved in step 5 just above, but the position of CTL waveform until step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.

7. Set the Tracking Control Circuit to the center position by pressing CH UP and DOWN buttons on VCR simultaneously.

1-C. Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture and precise tracking.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Set the Tracking Control Circuit to the center position by pressing both CH UP and DOWN buttons on VCR simultaneously.
2. Connect the oscilloscope to TP (C-PB) on the Main CBA. Use TP (RF-SW) as a trigger.
3. Play back the Gray Scale on the Alignment Tape (FL6NS8). Adjust the height of Guide Rollers [2] and [3] (Fig.M3) watching the oscilloscope display so that the envelope becomes as flat as possibile. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
4. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M9.
5. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M9.
6. When Guide Rollers [2] and [3] (Refer to Fig.M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the Tracking Control Up or Down buttons alternately, to check the symmetry of the envelope. Check the number of pushes to ensure center position. The number of pushes UP to achieve 1/2 level of envelope should match the number of pushes DOWN from center. If required, redo the "X Value Alignment."

1-D. Azimuth Alignment of Audio/Control Head

Purpose:

To correct the Azimuth alignment so that the Audio/Control Head meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Play back the alignment tape (FL6NS8) and confirm that the audio signal output level is 8 kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform of the oscilloscope is at maximum. (Fig. M6)

Dropping envelope level at the beginning of track.

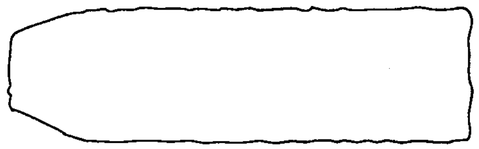


Fig. M7

Dropping envelope level at the end of track.

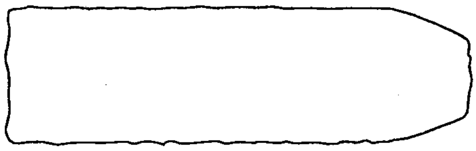


Fig. M8

Envelope is adjusted properly. (No envelope drop)

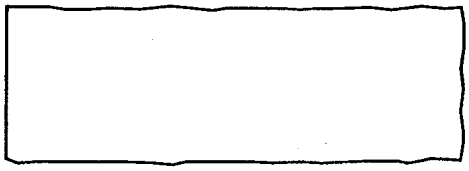


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Main Mechanism

Before following the procedures described below, be sure to:

1. Remove the deck assembly from the cabinet.
   (Refer to DISASSEMBLY INSTRUCTIONS in Main Section.)
2. Remove Front Loading Assembly from the main mechanism of the deck assembly. (See Fig. DM1.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [33] and [34] in Fig. DM3 on page 2-4-4. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Front Loading Assembly	T	DM1	2(S-1), (S-2), *(P-1)	
[2]	[1]	Motor Holder Assembly	T	DM3 DM5 DM6	3(S-4), Loading Belt	(+) Refer to Alignment Sec. Pg. 2-4-12.
[3]	[1]	Loading Motor Assembly	T	DM2 DM3 DM5	2(S-5), CL2693	
[4]	[1]	Cassette Drive Lever Assembly	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-12.
[5]	[1]	Pinch Roller Arm Assembly	T	DM3 DM5	(C-1) Pinch Roller Spring	Refer to Alignment Sec. Pg. 2-4-12.
[6]	[1]	Pinch Arm Assembly	T	DM3 DM5		Refer to Alignment Sec. Pg. 2-4-12.
[7]	[7]	Mode SW CBA	B	DM4 DM8	Stopper Boss, *(L-1)	
[8]	[8]	Joint CBA	T/B	DM2 DM3 DM4 DM7 DM8	(S-6), CN2692, CL2693, *CL2691, CL2692	
[9]	[1]	Cam	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-12.
[10]	[1]	Pulley Assembly	T	DM3 DM6	(W-1), Loading Belt	(+)
[11]	[11]	Head Amp CBA	T/B	DM2 DM3 DM4 DM8	(S-7), (S-8), CN3802, CL3801, CL3802	
[12]	[12]	Arm Idler Assembly	T	DM3 DM9	Clutch Shaft Cap, Clutch Bushing	(+)
[13]	[13]	Clutch Assembly	B	DM4 DM9	(C-2), (W-2) Capstan Belt	(+)
[14]	[13]	Capstan Motor Unit	B	DM4 DM10	3(S-9)	
[15]	[1]	M Lever Holder	T	DM3 DM11	(S-10)	(+) Oil, (+) Grease
[16]	[1]	Kick Arm Holder	B	DM4 DM11	Kick Arm Spring	
[17]	[16]	Kick Arm	B	DM4 DM11	Bushing	(+)
[18]	[18]	Mode Change Lever	T	DM3 DM12	*2(L-2)	(+)
[19]	[1]	Main Lever Assembly	T	DM3 DM12 DM15	*(L-3)	
[20]	[20]	Tape Guide Assembly	T	DM3 DM15	*(P-2), *(L-4)	Keep the distance specified in Fig. DM15.
[21]	[21]	ACE Head Assembly	T	DM3 DM14	2(S-11)	

STEP /LOC. No.	STARTING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[22]	[22]	Tension Lever Sub Assembly	T	DM3 DM13 DM22	*(L-5) *(P-6)	Refer to Alignment Sec. Pg. 2-4-14.
[23]	[22]	Band Brake Sub Assembly	T	DM3 DM13	(S-12), *(L-6)	
[24]	[18]	M Brake (S) Lever	T	DM3 DM12 DM16		(+)
[25]	[18]	M Brake (S)	T	DM3 DM16	*(P-3), *(L-7)	(+) When reassembling, hook the spring (P-3) after installation of Mode Change Lever.
[26]	[18]	S Brake Arm	T	DM3 DM16	*(P-4), *(L-8)	(+) When reassembling, hook the spring (P-4) after installation of Mode Change Lever.
[27]	[18]	M Brake (T) Assembly	T	DM3 DM16		(+)
[28]	[18]	T Brake Arm Assembly	T	DM3 DM16	*(P-5)	(+) When reassembling, hook the spring (P-5) after installation of Mode Change Lever.
[29]	[18]	Reel Base Assembly T	T	DM3 DM17	Poly Slider Washer	(+)
[30]	[18]	Reel Base Assembly S	T	DM3 DM17	Poly Slider Washer	(+) Base has slots.
[31]	[31]	Ground Brush Assembly	B	DM4 DM18 DM19	(S-13)	Refer to Alignment Sec. Pg. 2-4-12.
[32]	[11],[31] Only	Cylinder Assembly	T	DM3 DM18	3(S-14)	Refer to Alignment [31] Sec. Pg. 2-4-12.
[33]	[1]	Moving Guide S Assembly	T	DM3 DM20		
[34]	[1]	Moving Guide T Assembly	T	DM3 DM20		
[35]	[1] Only	FE Head	T	DM3 DM20	(S-15)	
[36]	[36]	Main Prism	T	DM3 DM20	(S-16)	
[37]	[1]	Loading Arm M Assembly	B	DM4 DM21	(C-3)	(+) Refer to Alignment Sec. Pg. 2-4-12.
[38]	[1]	Loading Gear A	B	DM4 DM21		(+) Refer to Alignment Sec. Pg. 2-4-12.
[39]	[1]	Loading Gear B	B	DM4 DM21		(+) Refer to Alignment Sec. Pg. 2-4-12.
[40]	[40]	Spring Supporter	B	DM4 DM22	(S-17)	
[41]	[40]	BT Drive Arm	B	DM4 DM12 DM22	(S-18), *(P-6), *(P-7)	
[42]	[42]	Rec Arm Assembly	B	DM4 DM22	(S-19)	
[43]	[42]	Reel Drive Arm	B	DM23	(S-20), (C-4), *(P-8) Drive Arm Roller	
[44]	[42]	Holder Kick Arm	B	DM23	*(P-9)	
[45]	[45]	Cleaning Head	T	DM3		

① ② ③ ④ ⑤ ⑥ ⑦

①: Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

②: Indicates the part to start disassembly in order to disassemble the part in column (1).

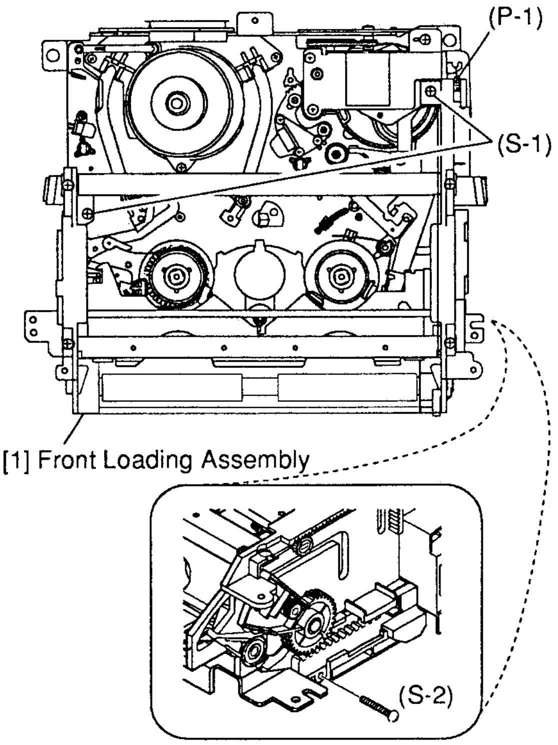
③: Name of the part

④: Location of the part
T=Top B=Bottom R=Right L=Left

⑤: Figure Number

⑥: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw
L=Locking Tab
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(C-2) = two Cut Washers (C-2)
2(L-2) = two Locking Tabs (L-2)

⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication information.


(P-1)
(S-1)
[1] Front Loading Assembly
(S-2)

To remove Front Loading Assembly:

1. Remove 3 screws (S-1) and (S-2).
2. Unhook spring (P-1).
3. Lift Assembly up carefully.

Fig. DM1

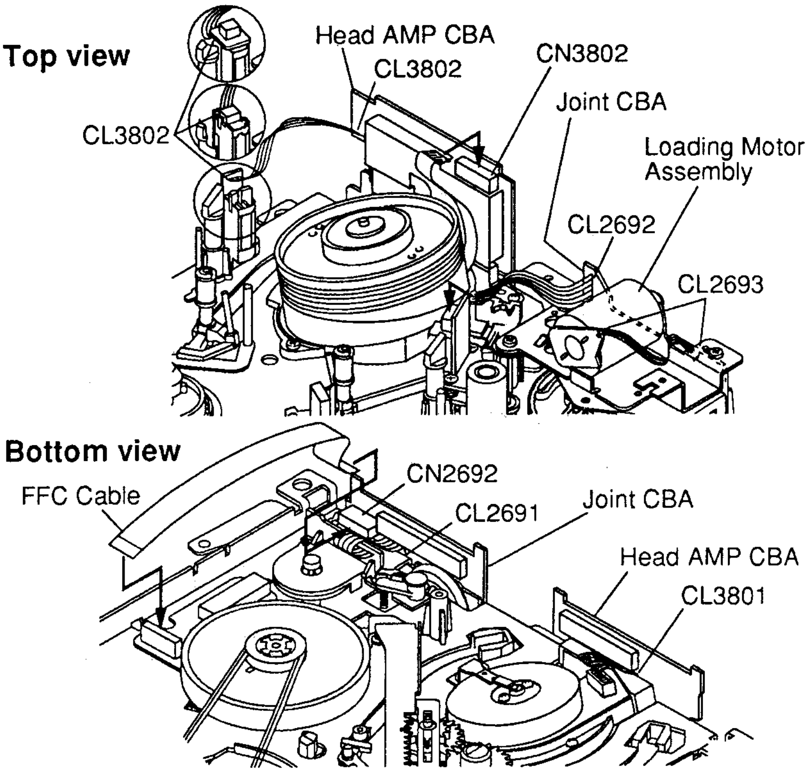

Top view
Head AMP CBA
CL3802
CN3802
Joint CBA
CL3802
Loading Motor Assembly
CL2692
CL2693
Bottom view
FFC Cable
CN2692
CL2691
Joint CBA
Head AMP CBA
CL3801

Fig. DM2

Top View

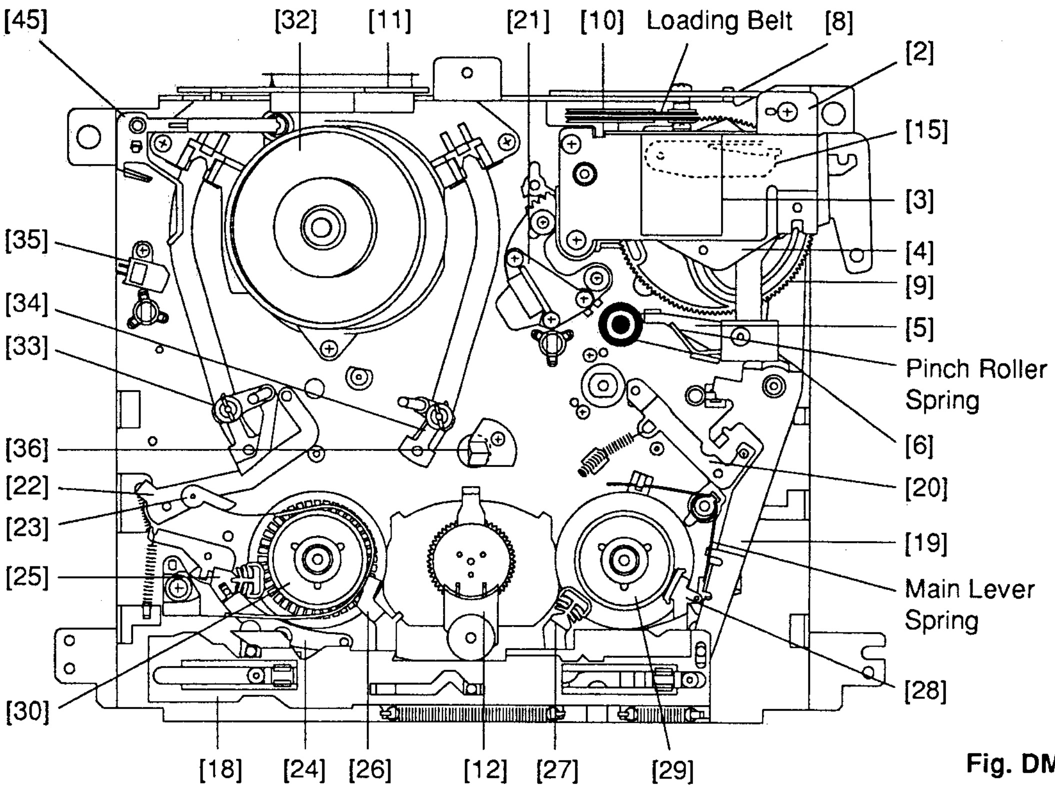

[45]
[32]
[11]
[21]
[10]
Loading Belt
[8]
[2]
[15]
[3]
[4]
[9]
[5]
Pinch Roller Spring
[6]
[20]
[19]
Main Lever Spring
[28]
[35]
[34]
[33]
[36]
[22]
[23]
[25]
[30]
[18]
[24]
[26]
[12]
[27]
[29]

Fig. DM3

Bottom View

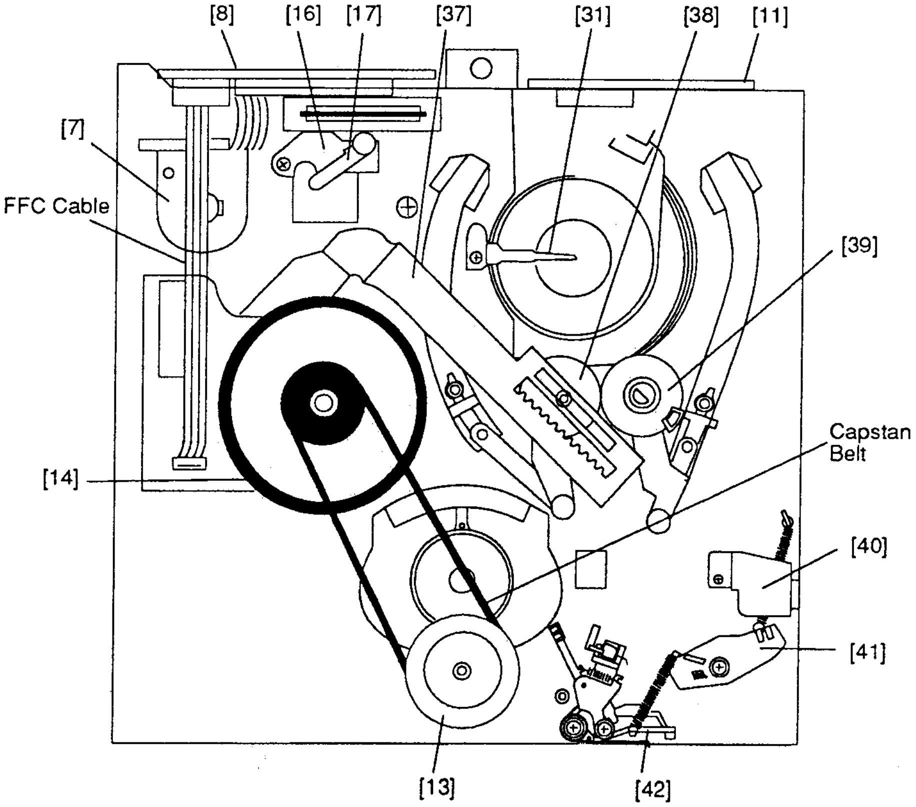

[8]
[16]
[17]
[37]
[31]
[38]
[11]
[7]
FFC Cable
[39]
[14]
Capstan Belt
[40]
[41]
[13]
[42]

Fig. DM4

When disassembling, unhook Pinch Roller Spring as shown by the arrow. With this spring unhooked, [5] and [6] can be removed from the chassis more easily.

When reassembling [2] through [6] and [9], refer to the Alignment Section, Pg. 2-4-12.

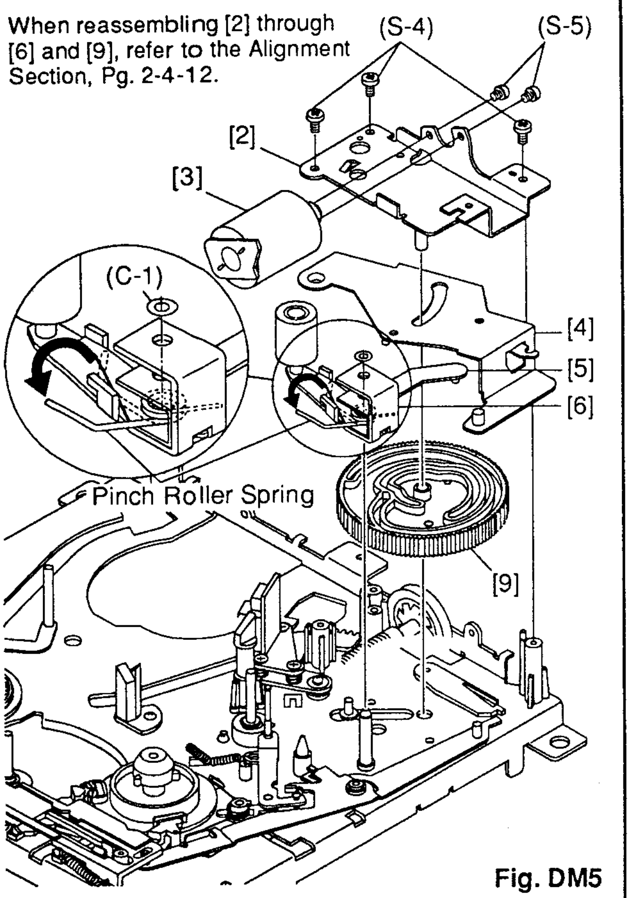
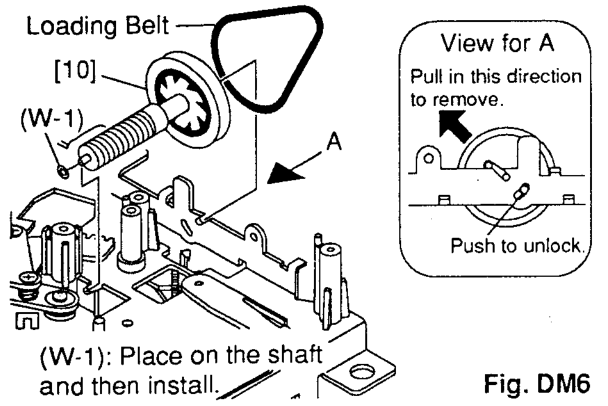

(S-4)
(S-5)
[2]
[3]
(C-1)
[4]
[5]
[6]
Pinch Roller Spring
[9]

Fig. DM5


Loading Belt
[10]
(W-1)
A
View for A

Pull in this direction to remove.

Push to unlock.

(W-1): Place on the shaft and then install.

Fig. DM6

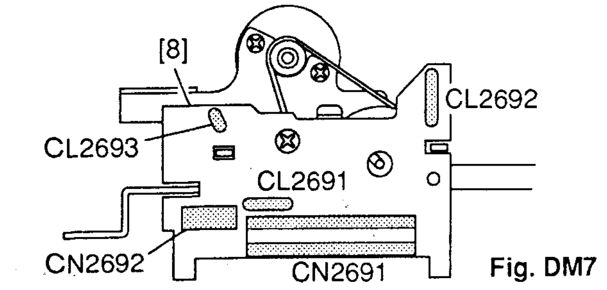

[8]
CL2693
CL2691
CL2692
CN2692
CN2691

Fig. DM7

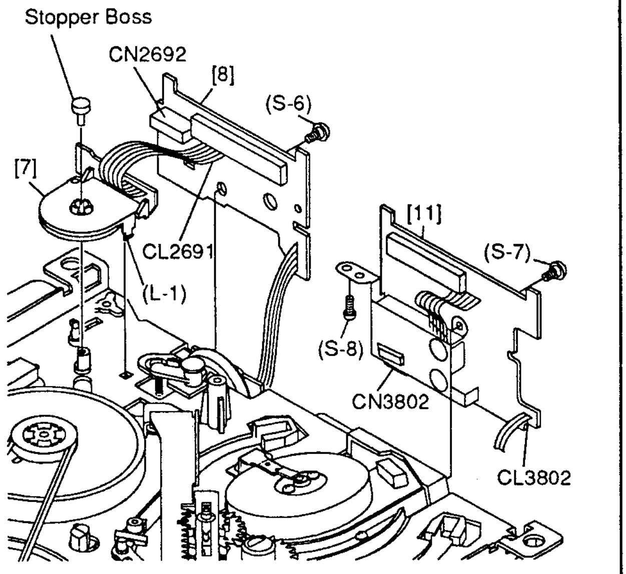

Stopper Boss
CN2692
[8]
(S-6)
[7]
CL2691
(L-1)
[11]
(S-7)
(S-8)
CN3802
CL3802

Fig. DM8

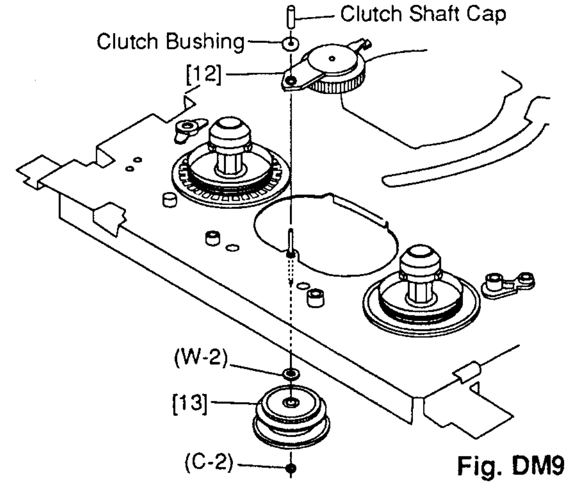

Clutch Shaft Cap
Clutch Bushing
[12]
(W-2)
[13]
(C-2)

Fig. DM9

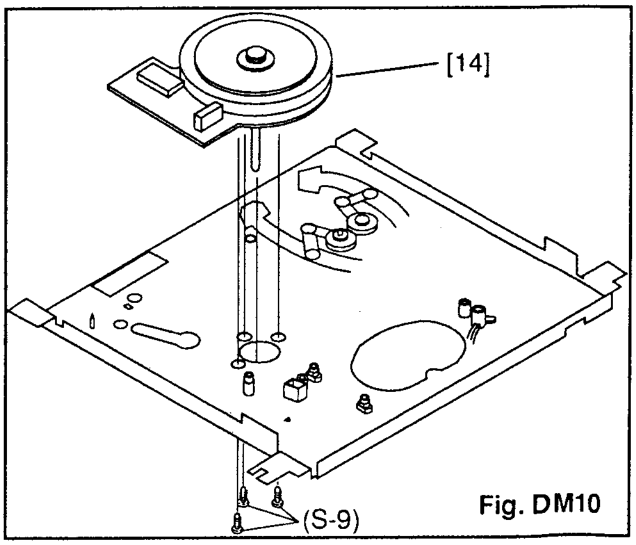
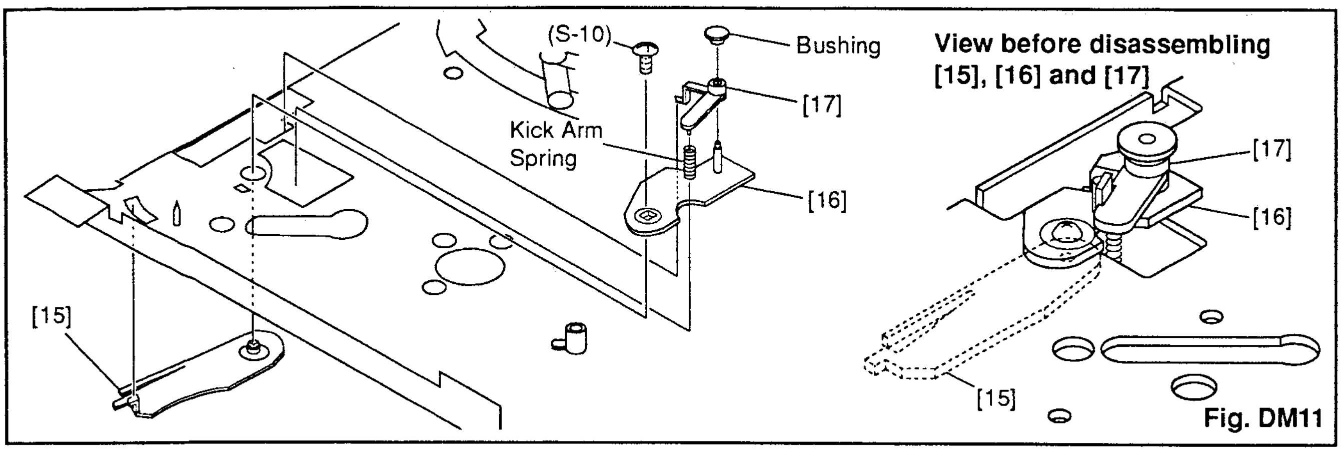


Fig. DM10


(S-10)
Bushing
[17]
Kick Arm Spring
[16]
[15]
[17]
[16]
[15]

View before disassembling [15], [16] and [17]

Fig. DM11

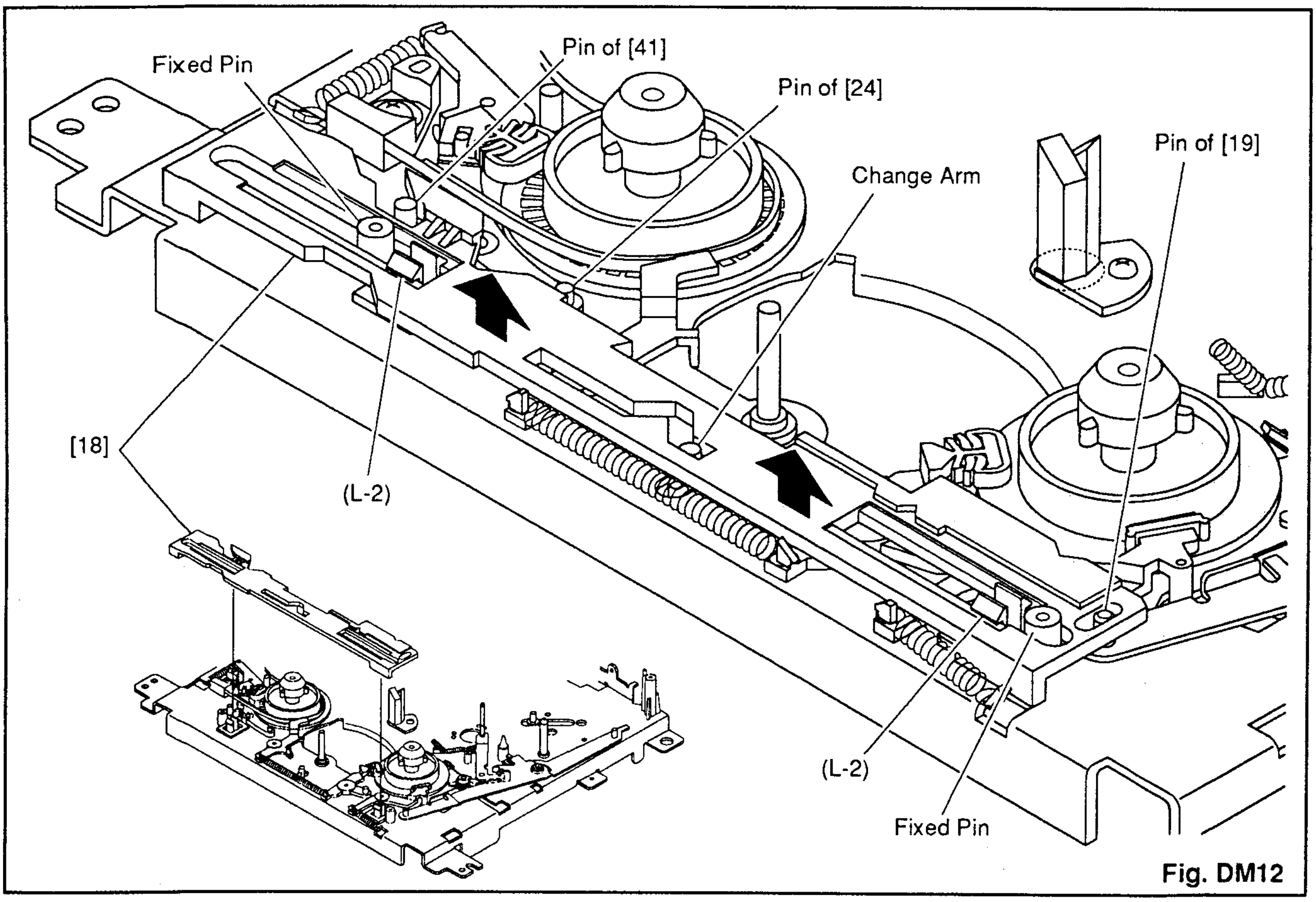
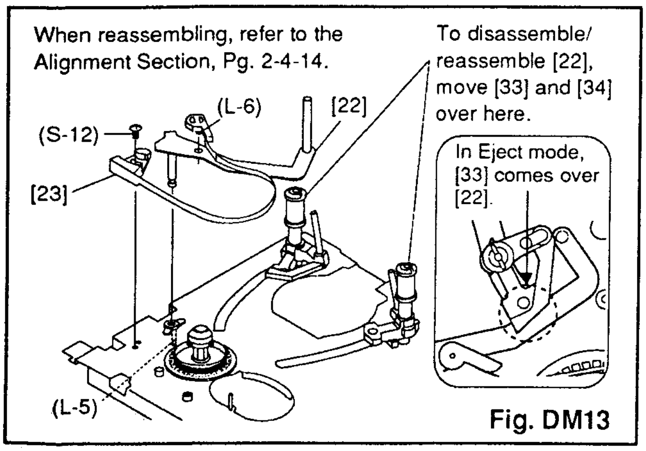

Fixed Pin
Pin of [41]
Pin of [24]
Change Arm
Pin of [19]
[18]
(L-2)
(L-2)
Fixed Pin

Fig. DM12


When reassembling, refer to the Alignment Section, Pg. 2-4-14.

To disassemble/reassemble [22], move [33] and [34] over here.

In Eject mode, [33] comes over [22].

(L-6)
[22]
(S-12)
[23]
(L-5)

Fig. DM13

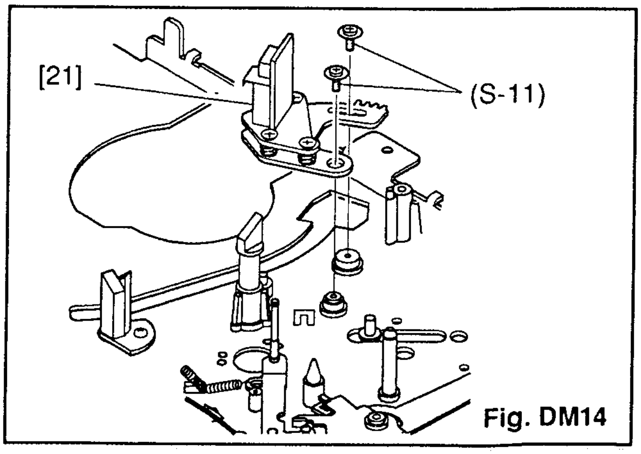
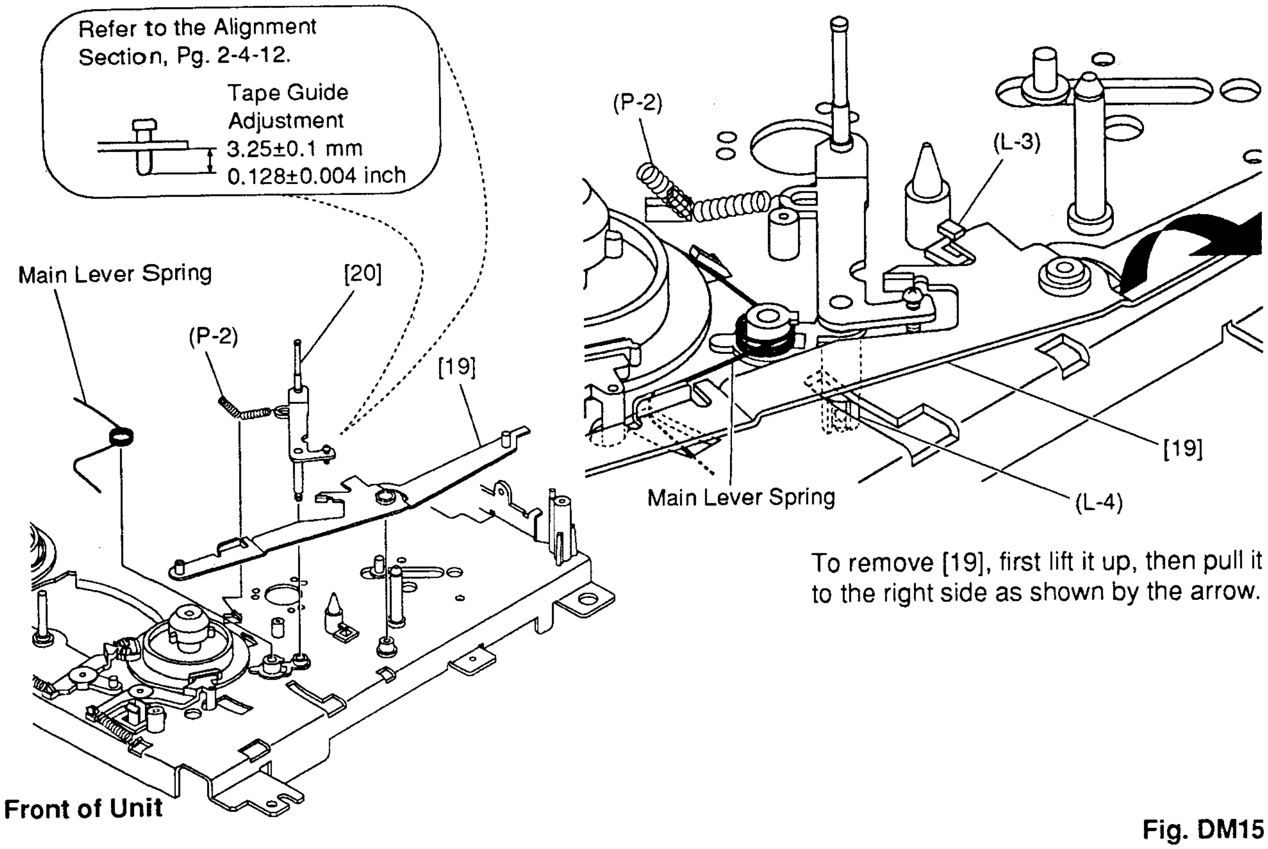


Fig. DM14


Main Lever Spring
(P-2)
[20]
[19]
Front of Unit
(P-2)
(L-3)
[19]
Main Lever Spring
(L-4)

Refer to the Alignment Section, Pg. 2-4-12.

Tape Guide Adjustment
3.25±0.1 mm
0.128±0.004 inch

To remove [19], first lift it up, then pull it to the right side as shown by the arrow.

Fig. DM15

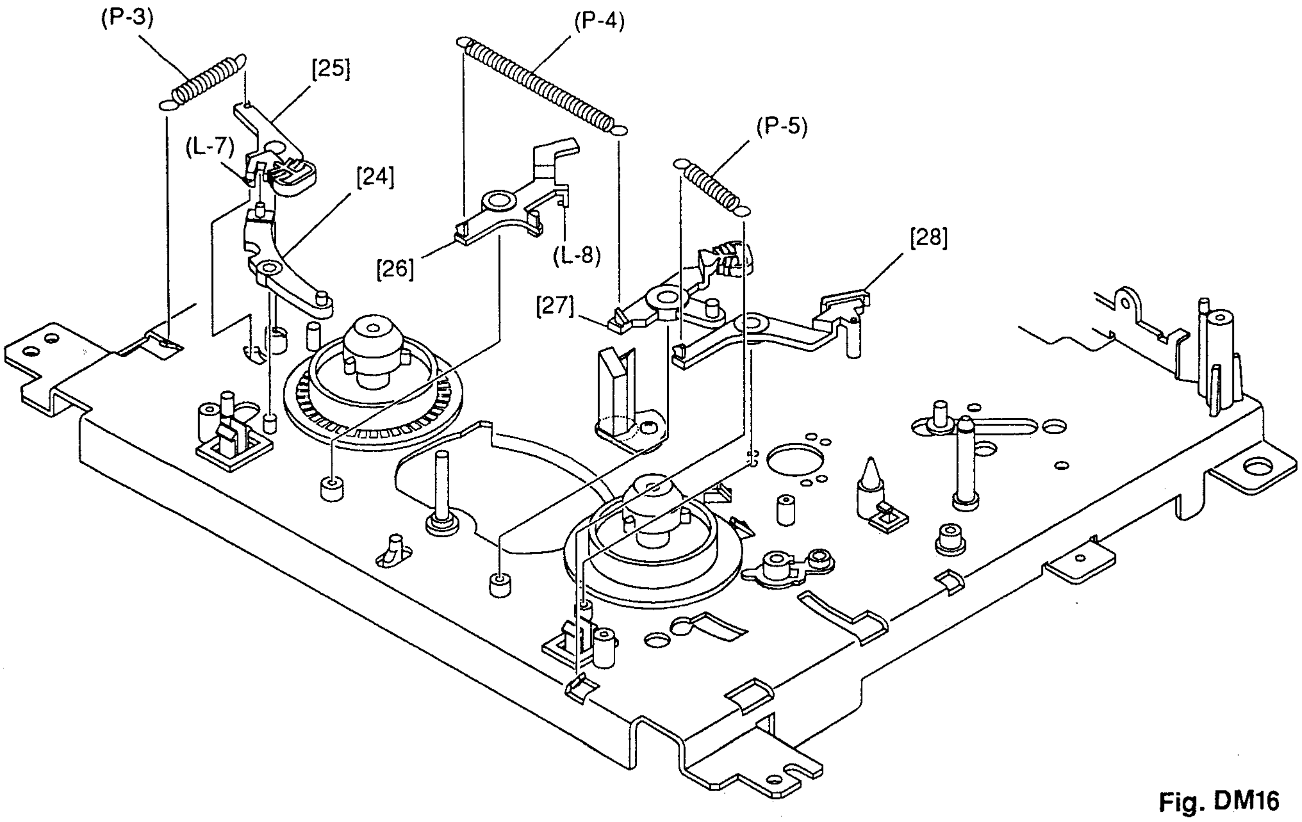
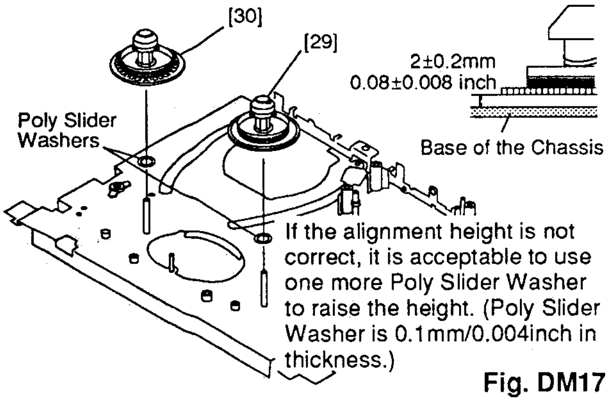
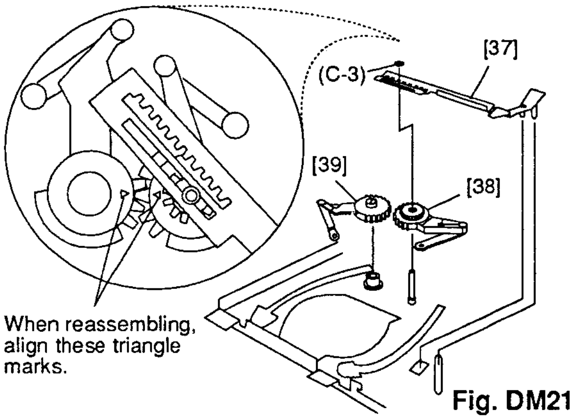

(P-3)
[25]
(L-7)
[24]
(P-4)
[26]
(L-8)
(P-5)
[27]
[28]

Fig. DM16


[30]
[29]
2±0.2mm
0.08±0.008 inch
Base of the Chassis
Poly Slider Washers

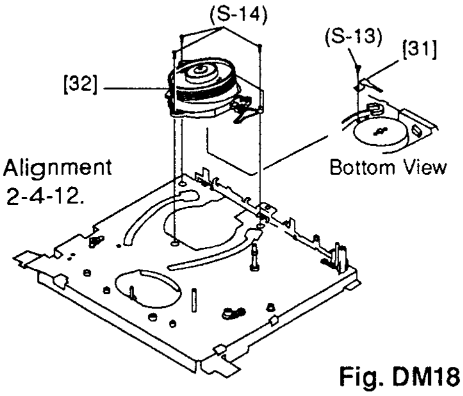
If the alignment height is not correct, it is acceptable to use one more Poly Slider Washer to raise the height. (Poly Slider Washer is 0.1mm/0.004inch in thickness.)

Fig. DM17



When reassembling, align these triangle marks.

Fig. DM21


(S-14)
(S-13)
[31]
[32]
Bottom View

Refer to the Alignment Section, Pg. 2-4-12.

Fig. DM18

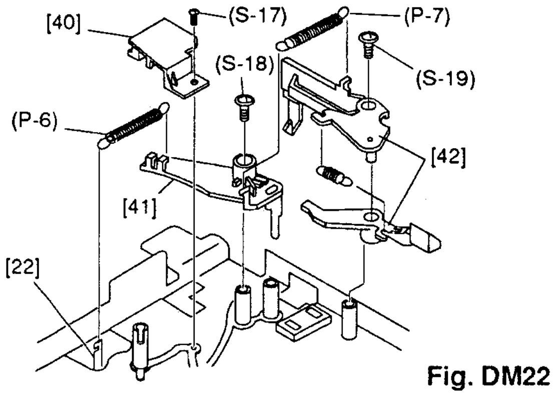

[40]
(S-17)
(P-7)
(S-18)
(S-19)
(P-6)
[42]
[41]
[22]

Fig. DM22

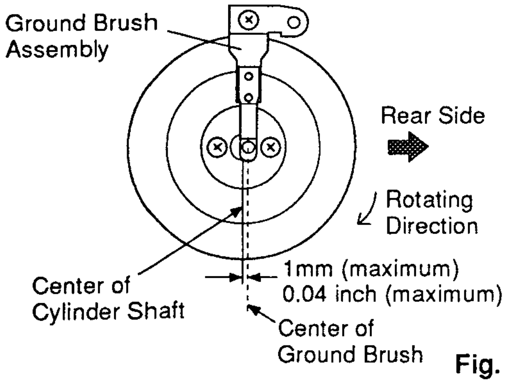

Ground Brush Assembly
Rear Side
Rotating Direction
Center of Cylinder Shaft
1mm (maximum)
0.04 inch (maximum)
Center of Ground Brush

Fig. DM19

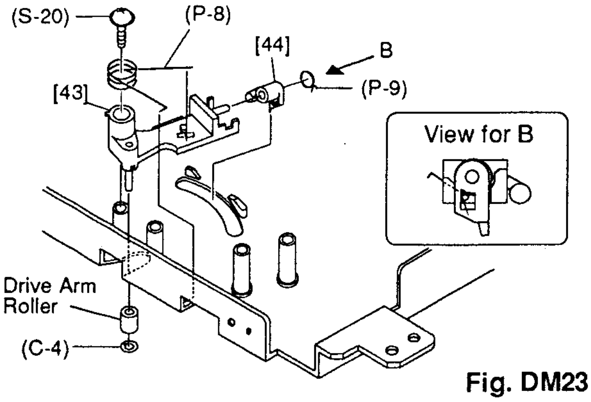
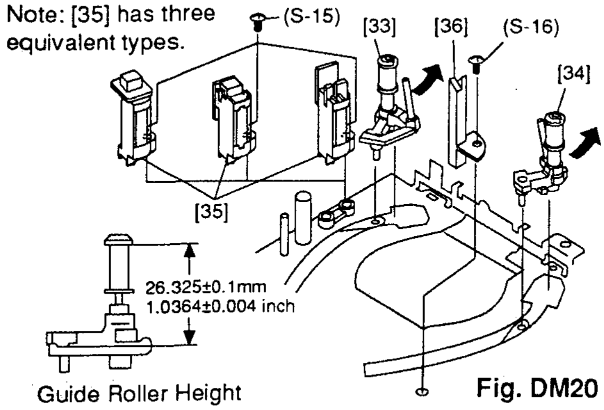

(S-20)
(P-8)
[44]
B
[43]
(P-9)
View for B
Drive Arm Roller
(C-4)

Fig. DM23


(S-15)
[33]
[36]
(S-16)
[34]
[35]
26.325±0.1mm
1.0364±0.004 inch
Guide Roller Height

Note: [35] has three equivalent types.

Fig. DM20

Front Loading Assembly

Before following the procedures described below, be sure to remove Front Loading Assembly from the main mechanism of the deck assembly. (See Fig. DM1.) When reassembling, start with the unit in Cassette-in mode and follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Door Opener	R	DM24 DM27	*(L-1) Door Opener Spring	(+)
*[2]	[2]	Slider Gear	R (or L)	DM28 DM30	(C-1)	(+)
*[3]	[2]	Slider Gear	L (or R)	DM28 DM30	(C-2)	(+)
		Slider Shaft	T			Install in Eject position.
[4]	[2]	Cassette Drive Gear	R	DM25 DM26 DM28	(S-1), (S-2), Cassette Drive Gear Spring	(+)
[5]	[2]	FL Rack	R	DM25 DM26 DM28		
[6]	[2]	F Door Opener R	R	DM25 DM28 DM29	*(L-2) F Door Opener R Spring	DM29
[7]	[2]	[7a] Front Guide [7b] Cassette Holder Assembly [7c] Deck Support B [7d] Deck Support F	T	DM25 DM26 DM27 DM28	4(S-3), *2(L-3)	
		[7e] Cassette Guide R	R			(+)
		[7f] Cassette Guide L	L			(+)
[8]	[8]	Gear Supporter	L	DM28	(S-4)	
[9]	[9]	Mirror Holder R	R	DM28		
[10]	[10]	Mirror Holder L	L	DM28		

① ② ③ ④ ⑤ ⑥ ⑦

①: Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

②: Indicates the part to start disassembling with in order to disassemble the part in column 1.

③: Name of the part

④: Location of the part: T=Top B=Bottom R=Right L=Left

⑤: Figure Number

⑥: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw,
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(L-2) = two Locking Tabs (L-2)

⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication.

*[2], *[3]: Slider Gear in Step [2] and that in Step [3] are identical. However, they are divided into two steps because, before reassembling Slider Shaft, one Slider Gear must be preinstalled at either end of Slider Shaft.

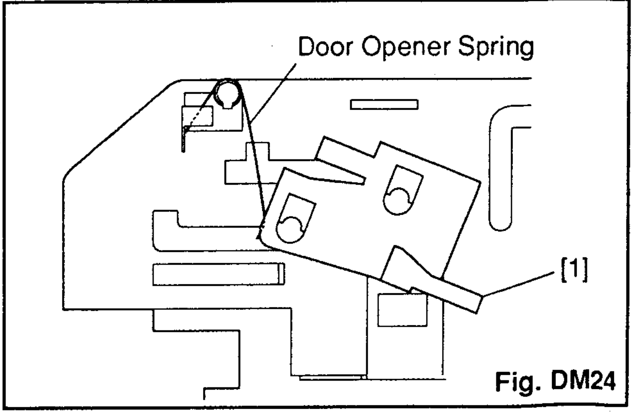
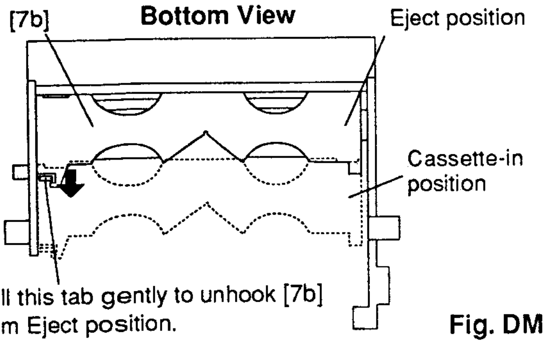


Fig. DM24

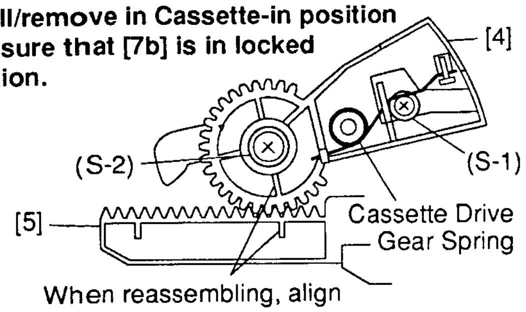
Before removing Parts [4], [5], [6] or [7], shift [7b] to Cassette-in position.


[7b]
Bottom View
Eject position
Cassette-in position

Pull this tab gently to unhook [7b] from Eject position.

Fig. DM25

Install/remove in Cassette-in position to ensure that [7b] is in locked position.


[4]
(S-2)
(S-1)
[5]
Cassette Drive Gear Spring

When reassembling, align these ribs as shown.

Fig. DM26

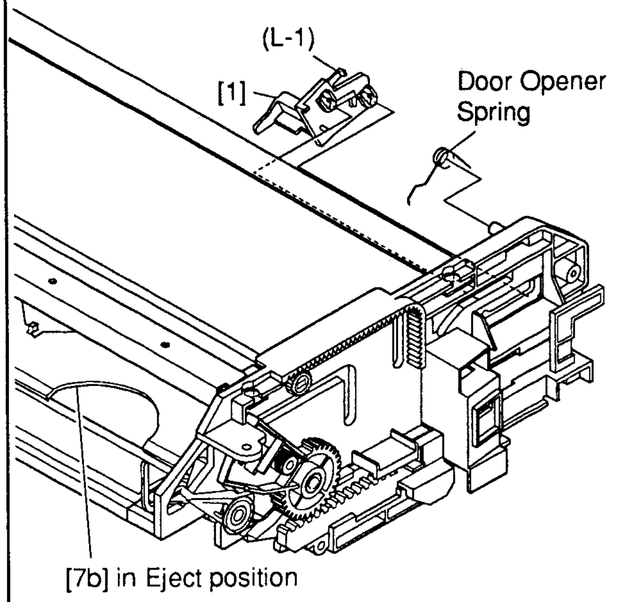

(L-1)
[1]
Door Opener Spring
[7b] in Eject position

Fig. DM27

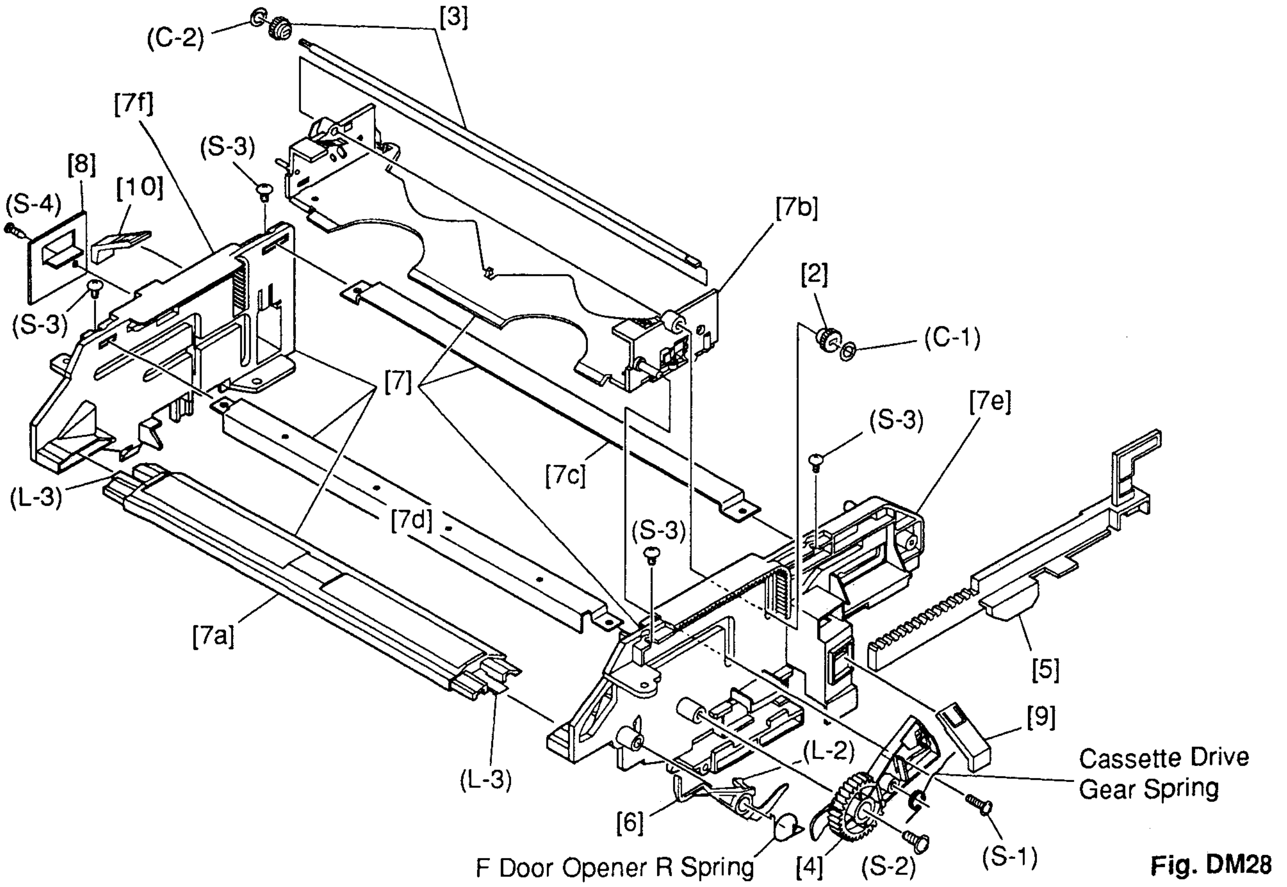

(C-2)
[3]
[7f]
[8]
(S-3)
[10]
(S-4)
[7b]
(S-3)
[2]
(C-1)
[7]
(S-3)
[7e]
(L-3)
[7c]
[7d]
(S-3)
[7a]
[5]
[9]
(L-2)
Cassette Drive Gear Spring
(L-3)
[6]
F Door Opener R Spring
[4]
(S-2)
(S-1)

Fig. DM28

View before disassembling [6]
(F Door Opener R Spring Installation)

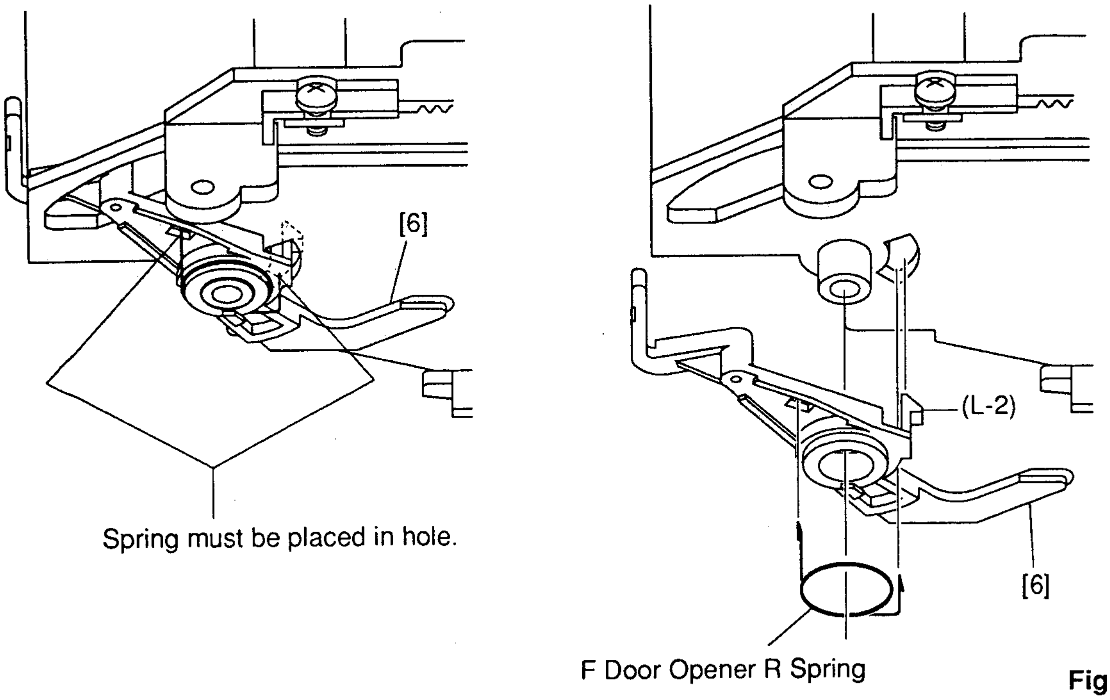
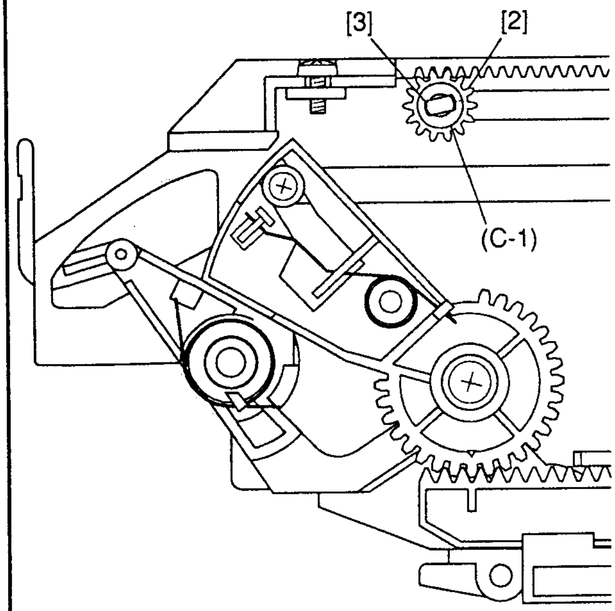

[6]
Spring must be placed in hole.
(L-2)
[6]
F Door Opener R Spring

Fig. DM29

View before disassembling [2] and [3]
(Installation of Slider Shaft and Slider Gear)



Install [2] and [3] in Eject position.
(When disassembling, [2] and [3] can be removed either in Eject position or Cassette-in position.)

- This figure shows where [2], [3] and other parts are in Eject position.

Fig. DM30

ALIGNMENT PROCEDURES OF MECHANISM

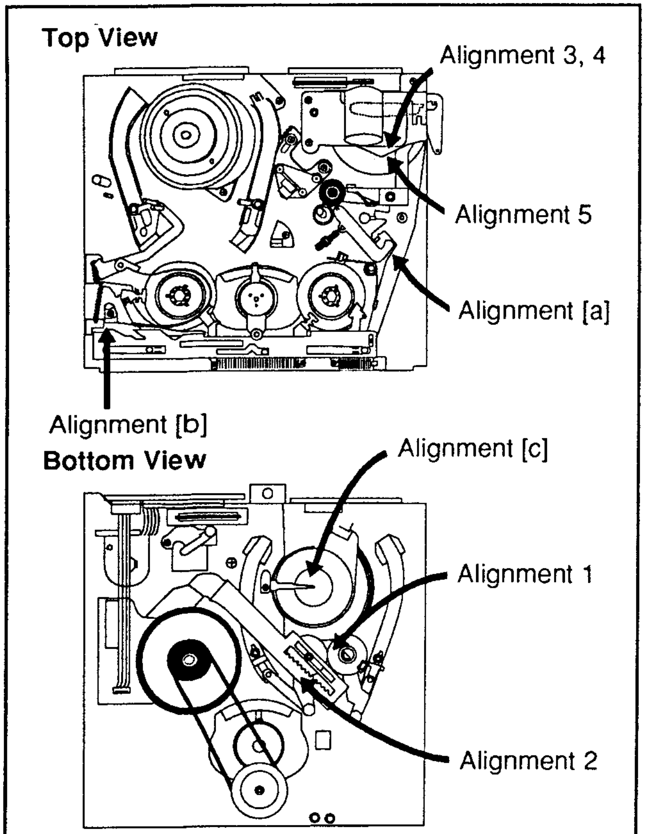
The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position



Top View
Alignment 3, 4
Alignment 5
Alignment [a]
Alignment [b]
Bottom View
Alignment [c]
Alignment 1
Alignment 2

Alignment [a] through [c] can be done independently of any other alignment. **Fig. AL1**

Alignment [a]

Tape Guide Assembly

1. Measurement of the black screw must be as specified in Fig. AL3.

Alignment 1

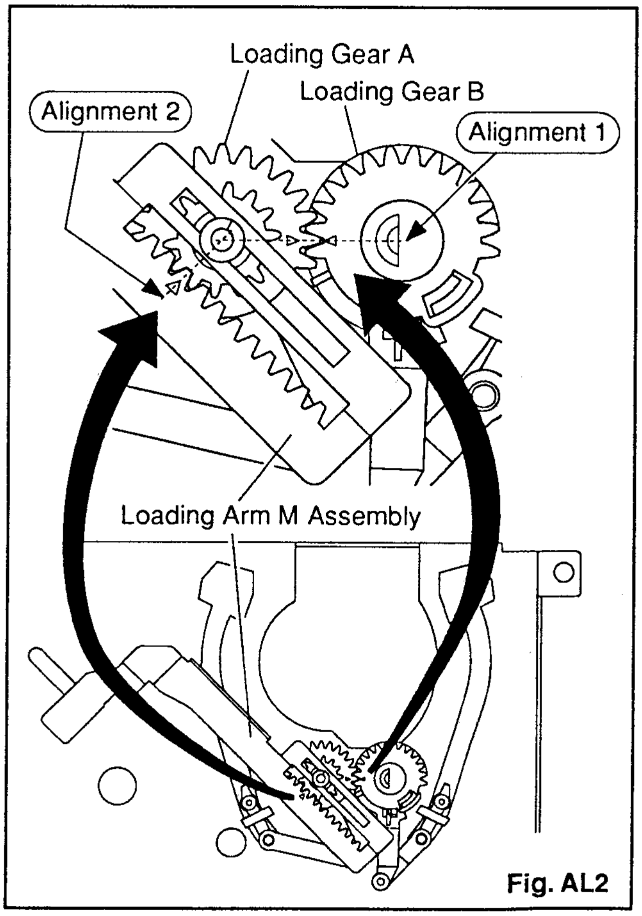
Loading Gears, A and B

1. Install Loading Gears A and B so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

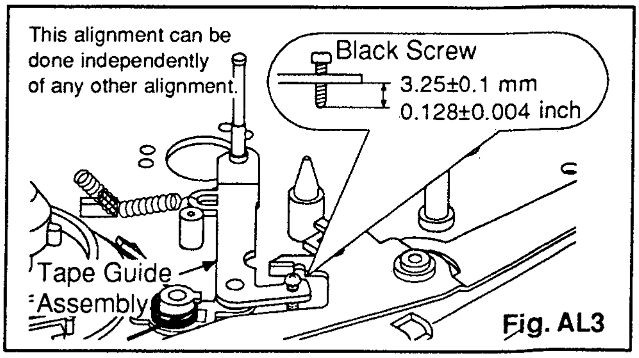
Loading Arm M Assembly

1. Keeping the two triangles pointing at each other, install Loading Arm M Assembly so that its tooth with yet another triangle mark is in the position to align with Loading Gear A and the center of the shaft. See Fig. AL2.



Loading Gear A
Loading Gear B
Alignment 2
Alignment 1
Loading Arm M Assembly

Fig. AL2



This alignment can be done independently of any other alignment.
Black Screw
3.25±0.1 mm
0.128±0.004 inch
Tape Guide Assembly

Fig. AL3

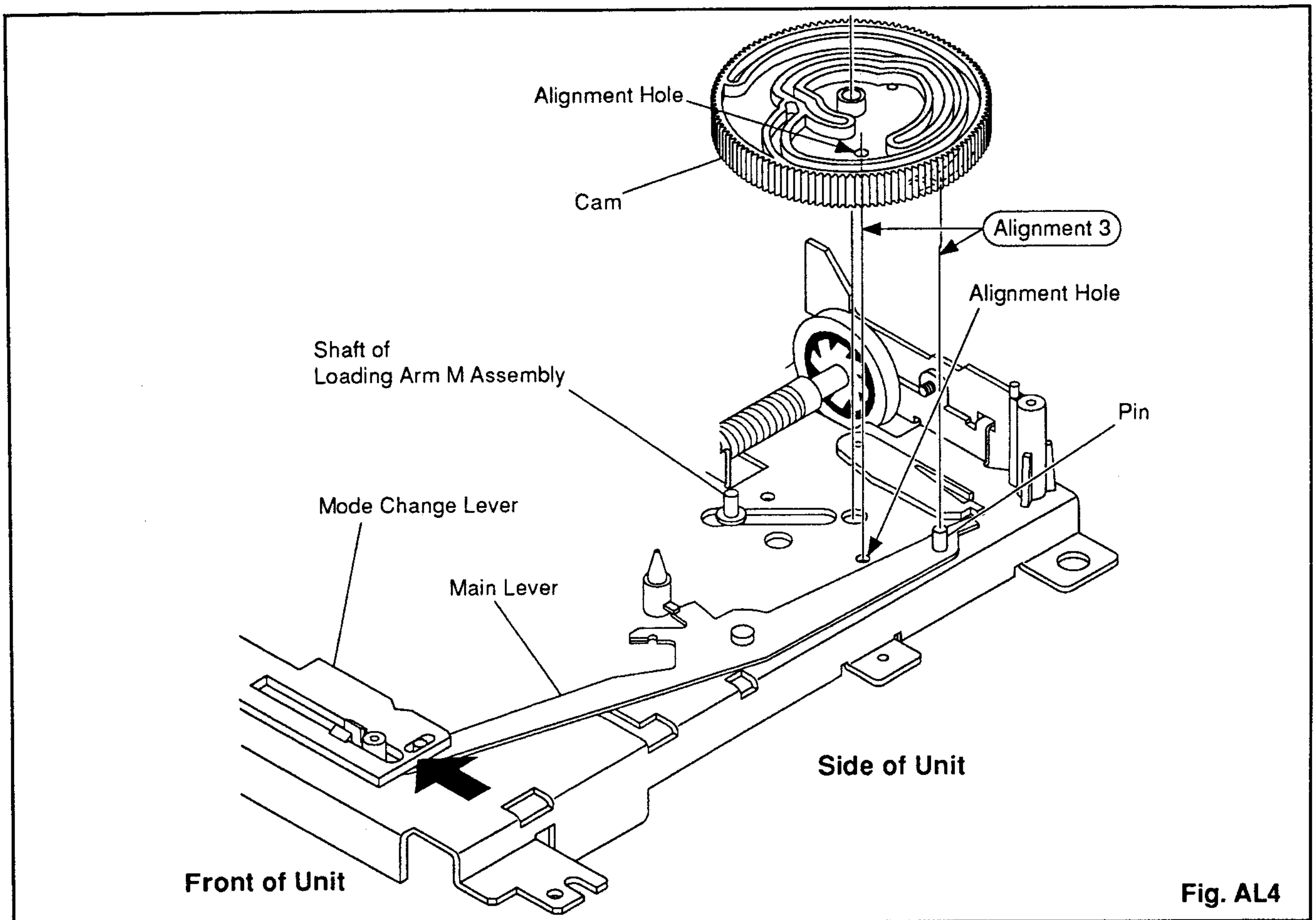

Alignment Hole
Cam
Alignment 3
Alignment Hole
Shaft of
Loading Arm M Assembly
Pin
Mode Change Lever
Main Lever
Side of Unit
Front of Unit

Fig. AL4

Alignment 3

Cam

1. Make sure that the mechanism is in Eject mode so that the shaft of Loading Arm M Assembly is in the position shown in Fig. AL4.
2. Align the alignment hole of the Cam with the alignment hole of the base, holding the Cam just above the base.
3. Carefully keeping these two holes aligned, install the Cam while pushing Mode Change Lever in the direction of the arrow. The Mode Change Lever must be pushed to make the pin on the Main Lever fit in the proper groove in the lower Cam.
4. After installing the Cam, make sure that the alignment hole of the Cam is still aligned with the base hole and that the pin on the Main Lever is inserted into the proper groove of the lower Cam as specified in Fig. AL4.

Alignment 4

Pinch Roller Arm Assembly

1. Ensure that the pin of the Pinch Roller Arm Assembly is positioned in the end of the groove of the upper Cam as shown in Fig. AL5.

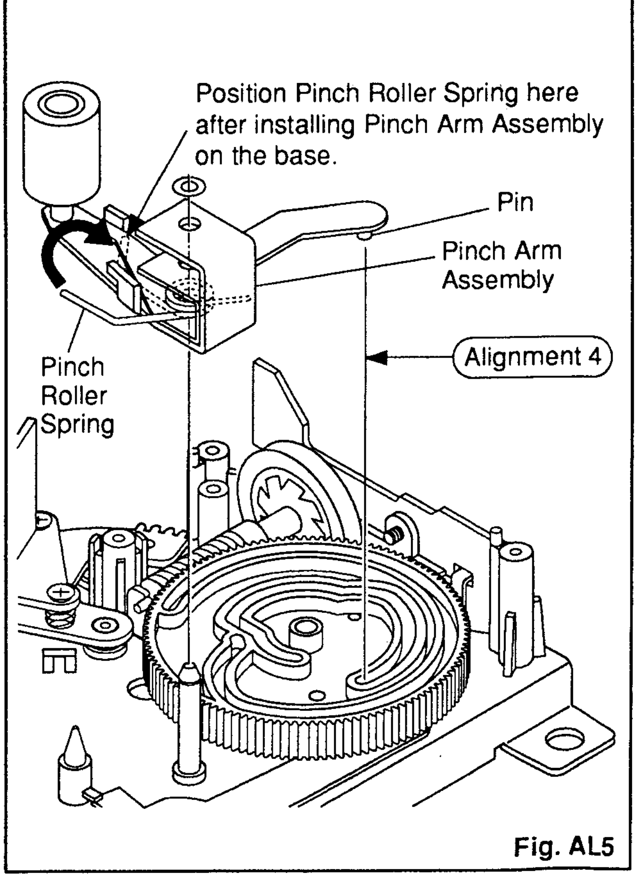

Position Pinch Roller Spring here after installing Pinch Arm Assembly on the base.
Pin
Pinch Arm Assembly
Alignment 4
Pinch Roller Spring

Fig. AL5

Alignment 5

Cassette Drive Lever Assembly

1. Ensure that the pin of the Cassette Drive Lever Assembly is positioned in the groove of the upper Cam as shown in Fig. AL6.

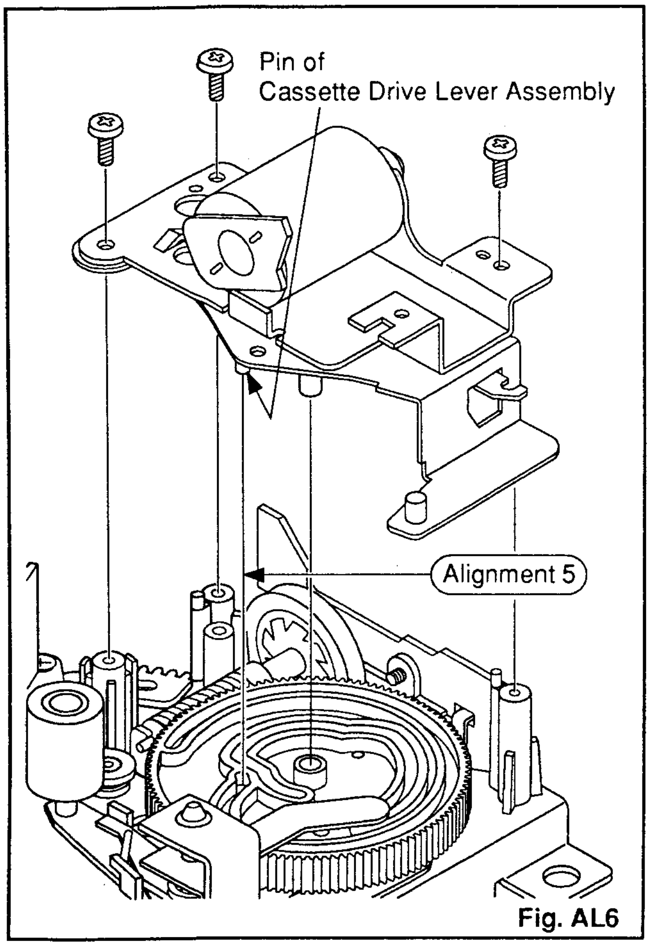

Pin of
Cassette Drive Lever Assembly
Alignment 5

Fig. AL6

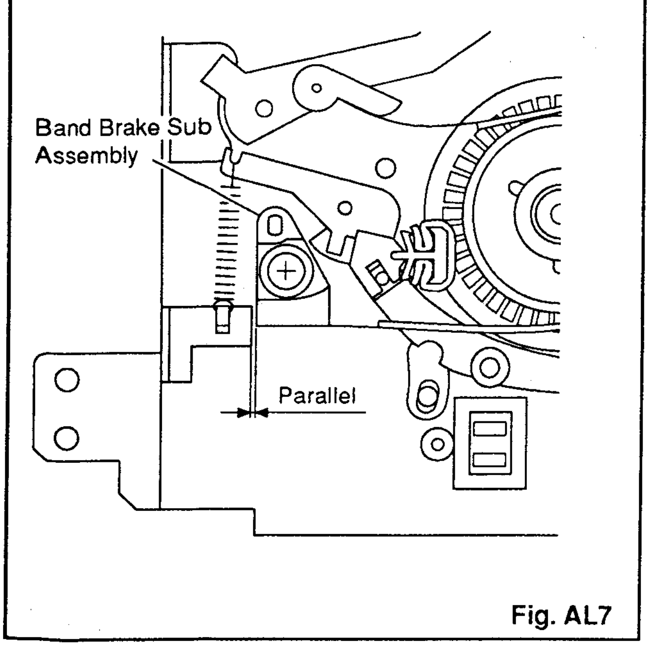

Band Brake Sub
Assembly
Parallel

Fig. AL7

Alignment [b]

This alignment can be performed independently of any other alignment.

Band Brake Sub Assembly

1. Ensure that Band Brake Sub Assembly is positioned parallel to the chassis' notch as shown in Fig. AL7. This measurement can be made by eye.

Alignment [c]

This alignment can be performed independently of any other alignment.

Ground Brush Assembly

1. Check to see if the Ground Brush Assembly is properly set in a position equal to or just less than 1mm (0.04 inch) (but never more than 1 mm or 0.04 inch), as measured from the center of the brush to the center of the Cylinder Shaft as shown in Fig. AL8.
2. If this measurement exceeds 1mm (0.04 inch), loosen and refasten the screw of the Ground Brush Assembly. If this is not enough and further adjustment is necessary, loosen and refasten the three screws of Cylinder Assembly. These three screws are shown in Fig. DM18 in DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM.

Note: DO NOT install the Ground Brush Assembly in the opposite position (on the left side of the center of the Cylinder shaft), but always within a maximum of 1mm (0.04 inch) to the right side of the center of this shaft.

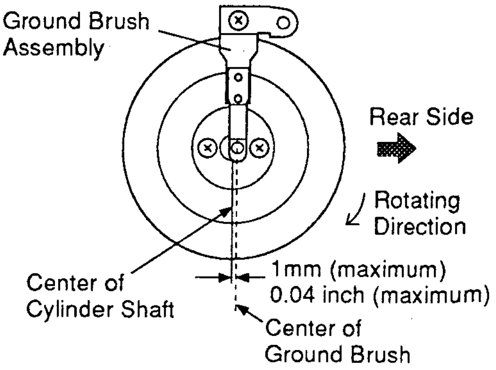

Ground Brush
Assembly
Rear Side
Rotating
Direction
Center of
Cylinder Shaft
1mm (maximum)
0.04 inch (maximum)
Center of
Ground Brush

Fig. AL8

EXPLODED VIEWS AND PARTS LIST SECTION

VIDEO CASSETTE RECORDER

SVC 569

Sec. 3: Exploded views and Parts List Section

- Exploded views
- Parts List

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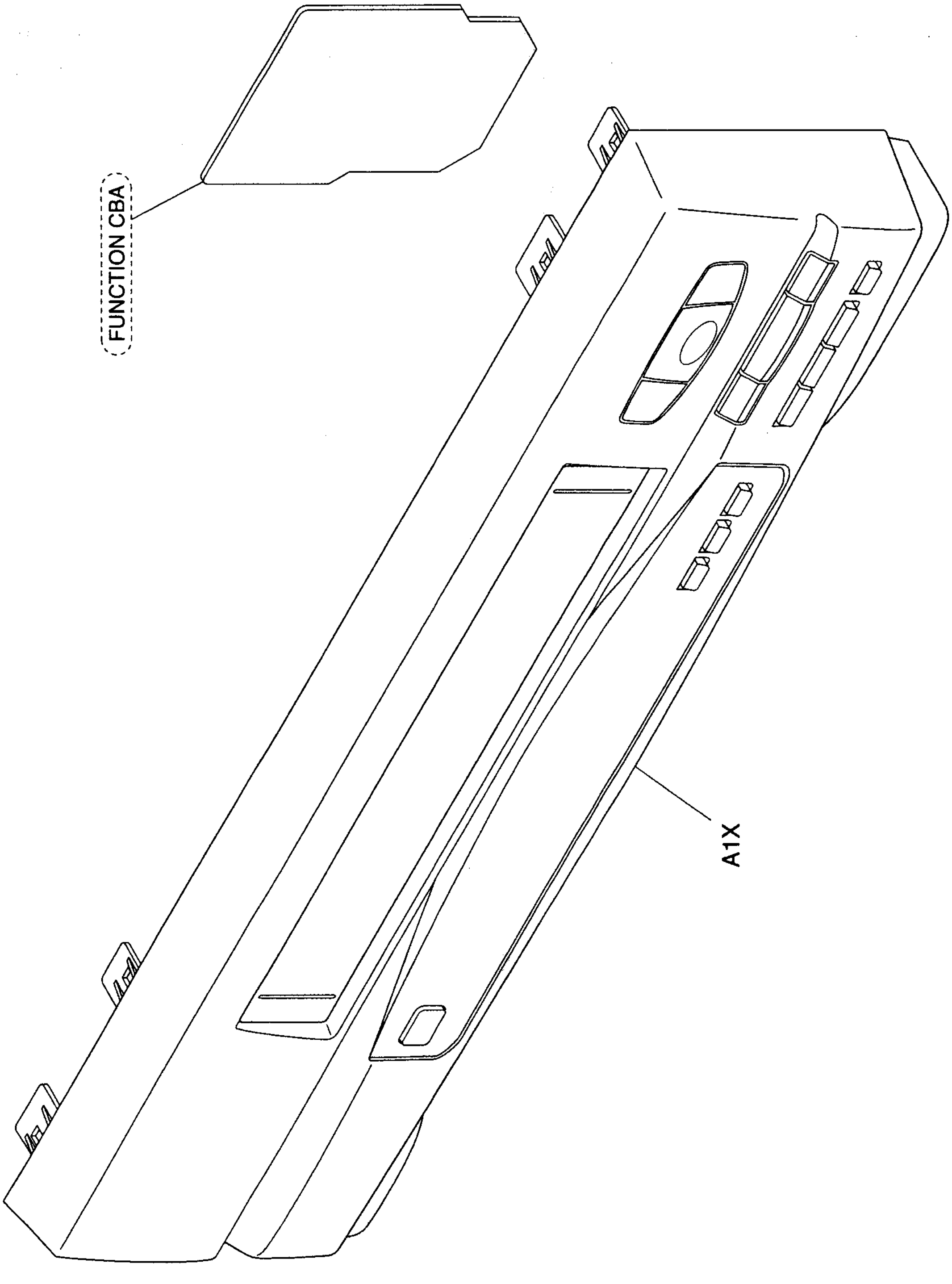
Electrical Parts List 3-3-1
Deck Mechanical Parts List 3-4-1
Deck Electrical Parts List........ 3-5-1

EXPLODED VIEWS

Front Panel

See Electrical Parts List for parts with this mark.

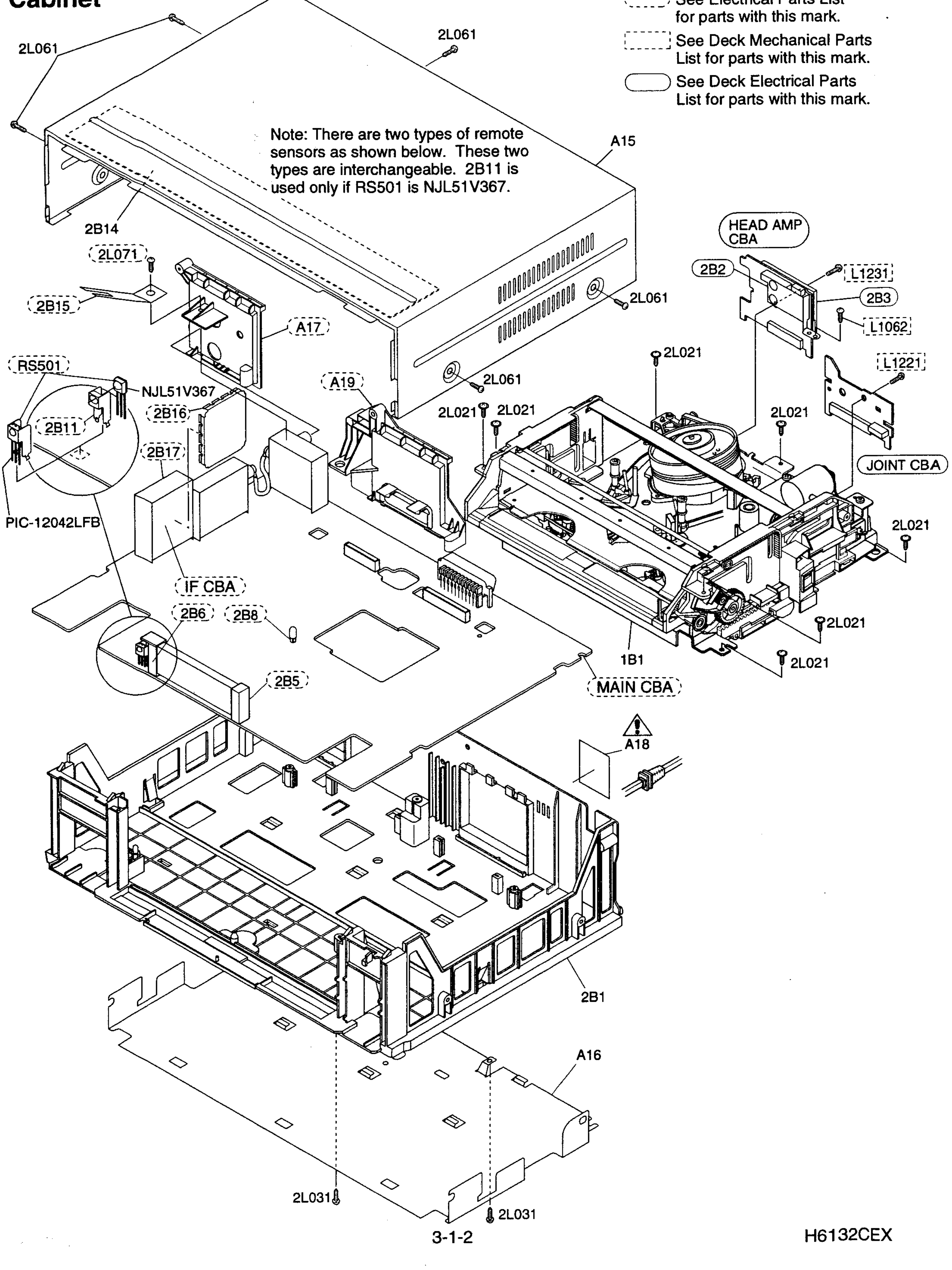

FUNCTION CBA
A1X

Cabinet

See Electrical Parts List for parts with this mark.

See Deck Mechanical Parts List for parts with this mark.

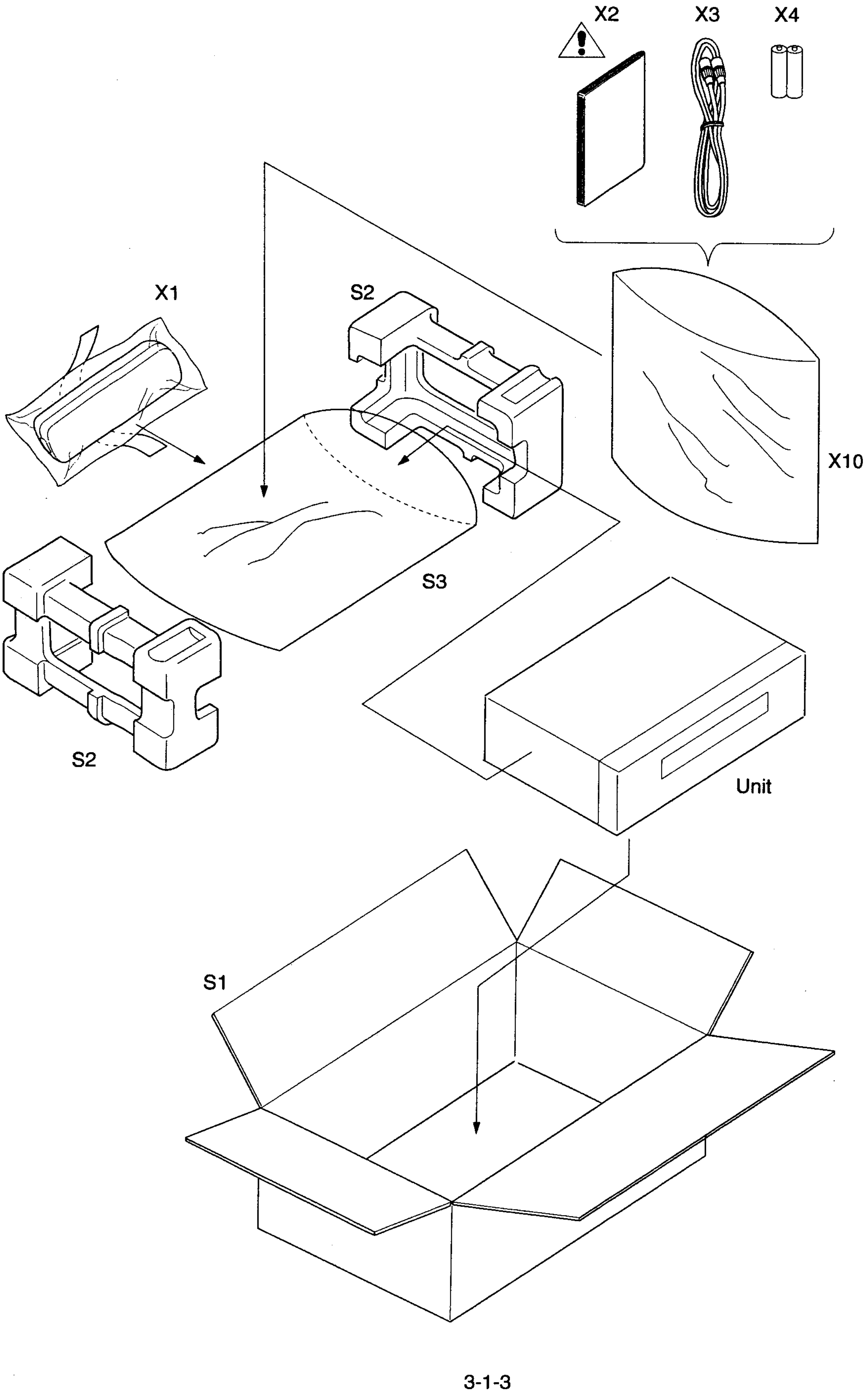
See Deck Electrical Parts List for parts with this mark.



Note: There are two types of remote sensors as shown below. These two types are interchangeable. 2B11 is used only if RS501 is NJL51V367.

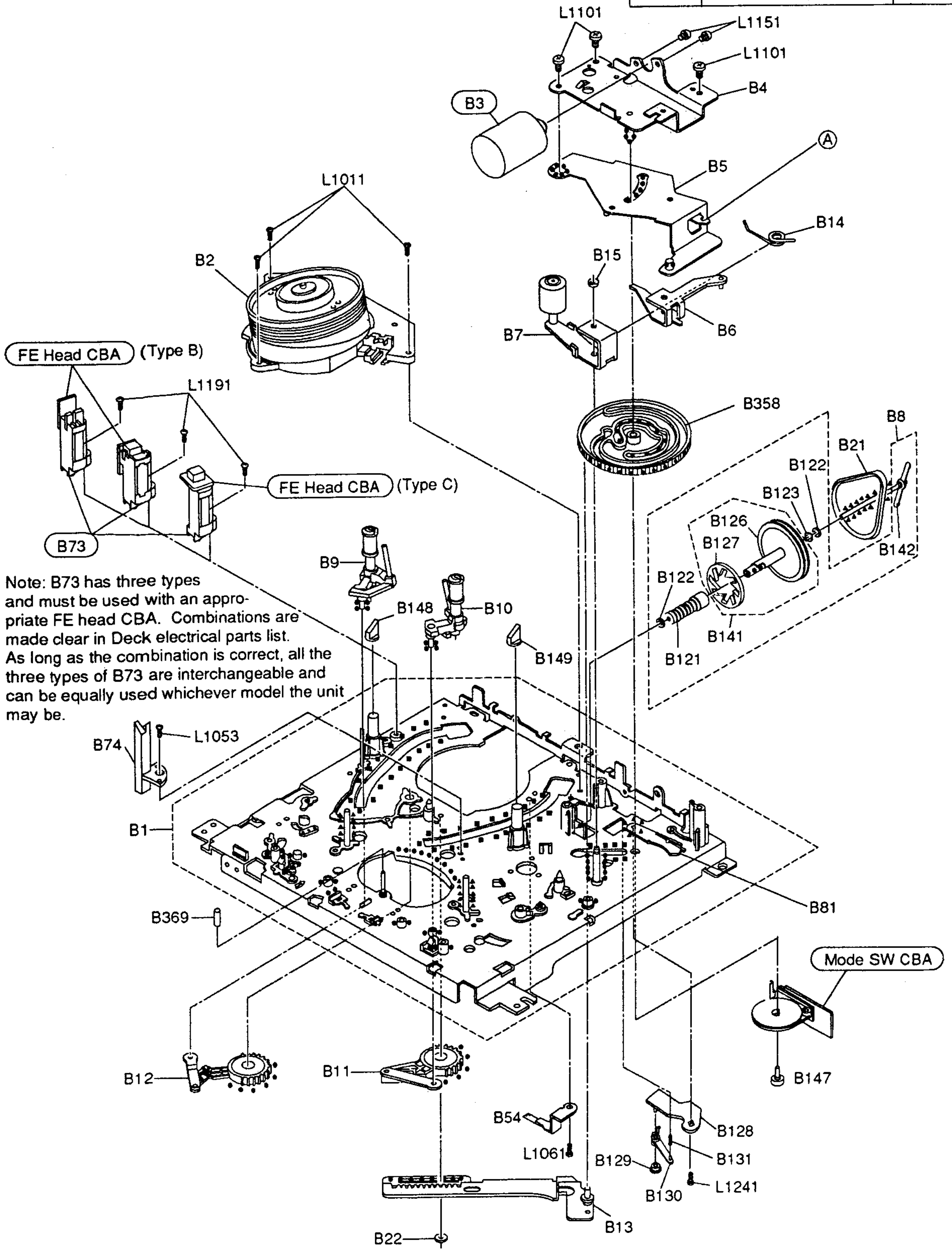
2L061
2L061
A15
2B14
2L071
2B15
A17
HEAD AMP CBA
2B2
L1231
2B3
2L061
L1062
2L021
RS501
NJL51V367
2B11
2B16
A19
2L061
L1221
2L021
2L021
2L021
2B17
JOINT CBA
PIC-12042LFB
2L021
IF CBA
2B6
2B8
2L021
1B1
2L021
2B5
MAIN CBA
A18
2B1
A16
2L031
2L031

Packing


X2
X3
X4
X1
S2
X10
S3
S2
Unit
S1

Deck Mechanism
View 1

Mark	Description	Part No.
×××××	Sankohl (FG-84M)	0VZZ00062
■■■■■	Three Bond (TB-1901)	0VZZ00063
●●●●●	Floil (G-374G)	0VZZ00109
▲▲▲▲▲	Slidus Oil (#150)	0VZZ00065



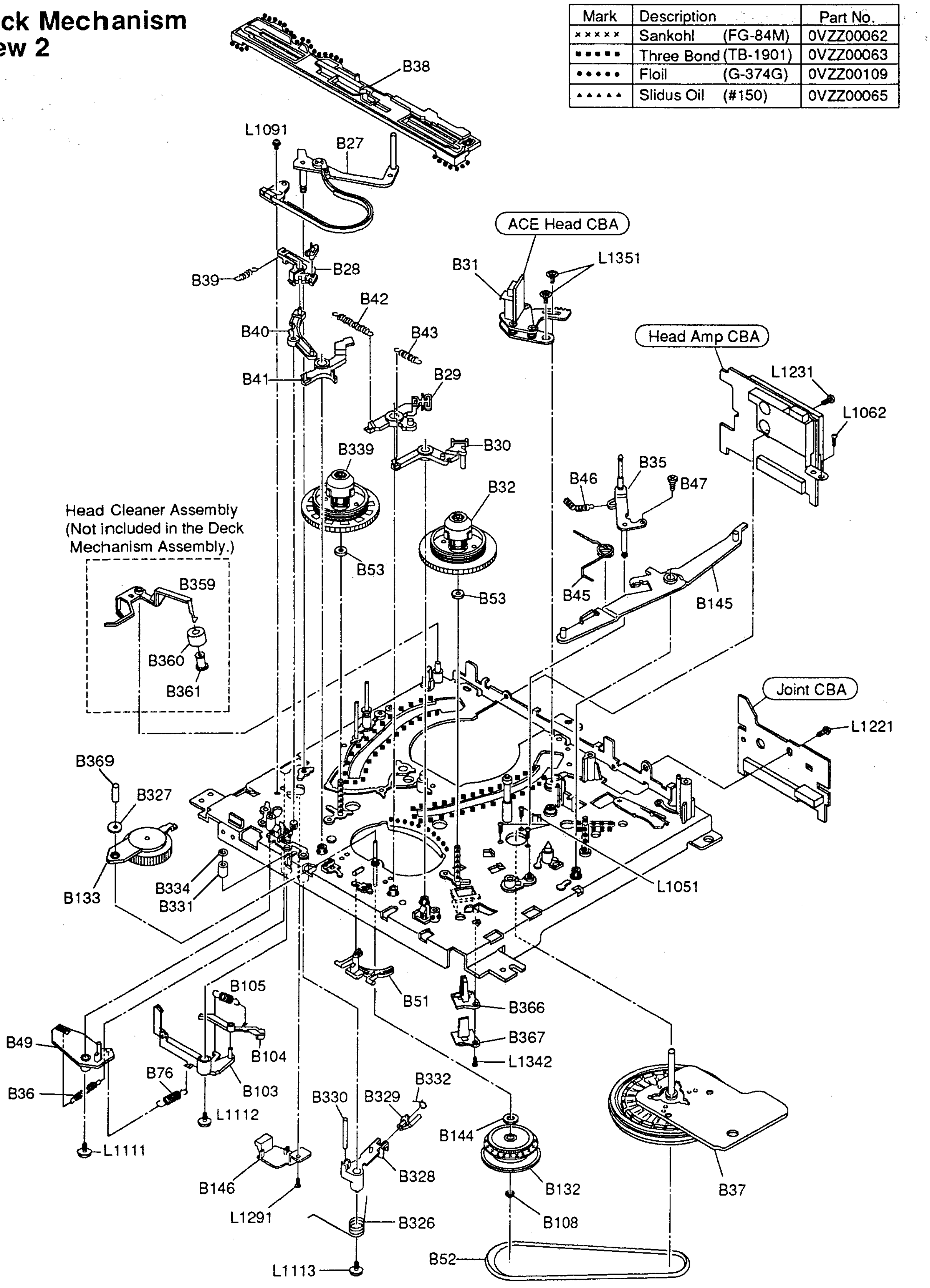
L1101
L1151
L1101
B4
B3
Ⓐ
B5
L1011
B14
B2
B15
B7
B6
FE Head CBA (Type B)
L1191
B358
B8
B21
B122
B123
FE Head CBA (Type C)
B126
B127
B142
B73
B9
B122
B148
B10
B149
B141
B121
B74
L1053
B1
B81
B369
Mode SW CBA
B12
B11
B147
B54
L1061
B128
B129
B131
B130
L1241
B13
B22

Note: B73 has three types and must be used with an appropriate FE head CBA. Combinations are made clear in Deck electrical parts list.
As long as the combination is correct, all the three types of B73 are interchangeable and can be equally used whichever model the unit may be.

( ) See the Deck Electrical Parts List.

Deck Mechanism
View 2

Mark	Description	Part No.
×××××	Sankohl (FG-84M)	0VZZ00062
▪▪▪▪▪	Three Bond (TB-1901)	0VZZ00063
•••••	Floil (G-374G)	0VZZ00109
▴▴▴▴▴	Slidus Oil (#150)	0VZZ00065

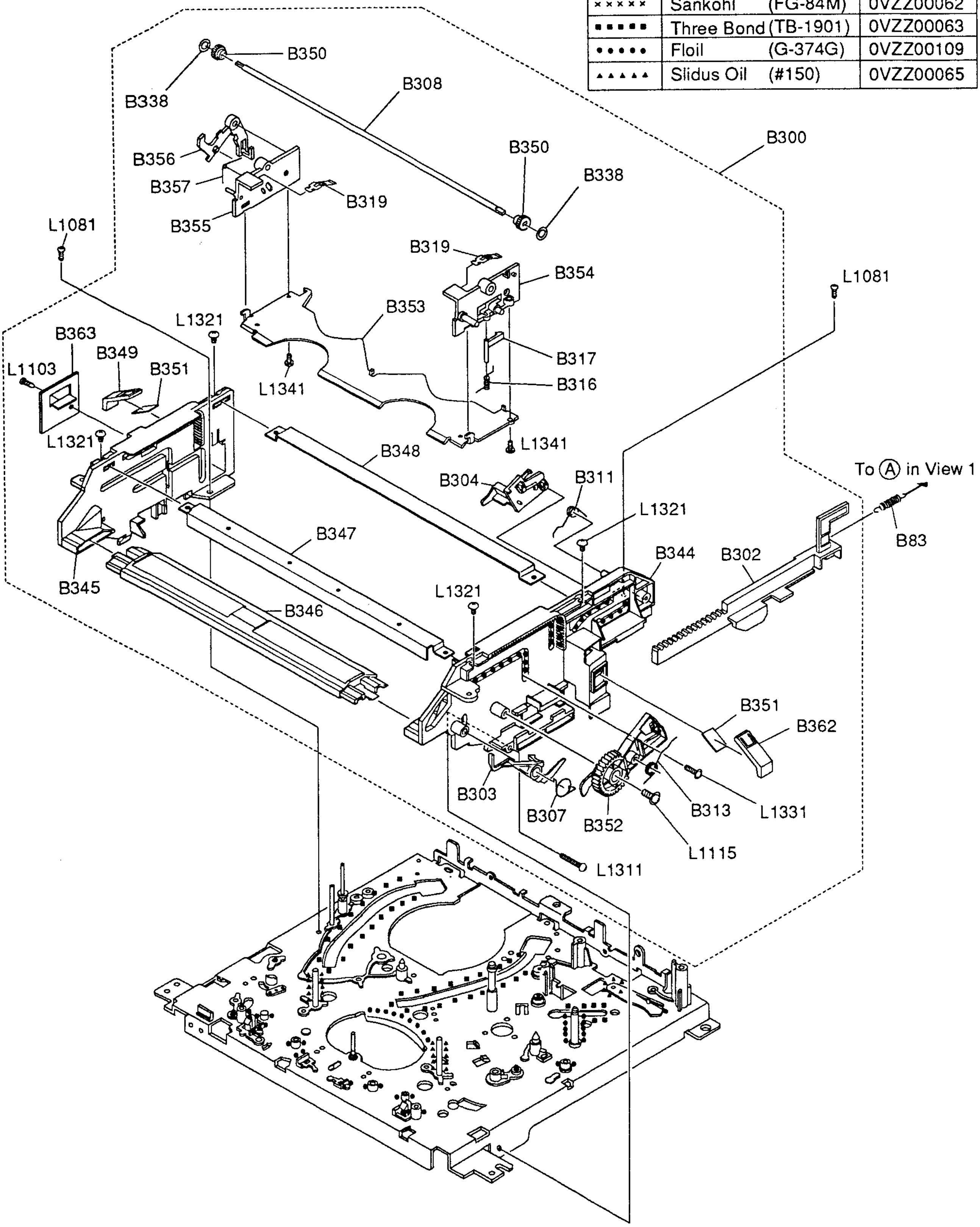


B38
L1091
B27
ACE Head CBA
L1351
B31
B39
B28
B42
B40
B43
Head Amp CBA
B41
B29
L1231
L1062
B339
B30
B35
B46
B47
B32
Head Cleaner Assembly
(Not included in the Deck
Mechanism Assembly.)
B359
B53
B53
B45
B145
B360
B361
Joint CBA
L1221
B369
B327
B133
B334
B331
L1051
B105
B51
B366
B49
B367
B104
L1342
B76
B103
B332
B36
B330
B329
L1112
B144
L1111
B146
B328
B132
B37
L1291
B326
B108
B52
L1113

⬭ See the Deck Electrical Parts List.

Deck Mechanism
View 3

Mark	Description	Part No.
×××××	Sankohl (FG-84M)	0VZZ00062
■■■■■	Three Bond (TB-1901)	0VZZ00063
●●●●●	Floil (G-374G)	0VZZ00109
▲▲▲▲▲	Slidus Oil (#150)	0VZZ00065


B350
B338
B308
B356
B357
B319
B355
B350
B338
B300
L1081
B319
B354
L1081
L1321
B353
B363
B349
B351
L1103
B317
L1341
B316
L1321
L1341
B348
To Ⓐ in View 1
B304
B311
L1321
B83
B347
B344
B302
B345
L1321
B346
B351
B362
B303
B313
L1331
B307
B352
L1115
L1311

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

Ref. No.	Description	Part No.
A1X	FRONT ASSEBMLY	0VM201971
A 15	CASE, TOP	0VM100621
A 16	PANEL, BOTTOM	0VM201919
A 18 ⚠	LABEL, RATING	0VM407597
1B 1	DECK ASSEBMLY	N5106FK
2B 1	CHASSIS	0VM000090
2B 14	FIBER, TOP CASE	0VM406787
2L 021	SCREW, P-TIGHT 3X10 WASHER HEAD+	GCMP3100
2L 031	SCREW, P-TIGHT 3X10 BIND HEAD	GBMP3100
2L 061	SCREW, P-TIGHT 4X12 BIND HEAD+	GBKP4120
	PACKING	
S 1	GIFT BOX CARTON	0VM407598
S 2	STYROFOAM(U13 PAL)	0VM201926
S 3	ACCESSORY BAG 470X560X0.05T	Z547560
	ACCESSORY	
X 1	REMOTE CONTROL UNIT RRS2000-7306CR or	UREMT34SR015
	REMOTE CONTROL UNIT 364/CRC001/2H/P2/VPS or	N9023VN
	REMOTE CONTROL UNIT 364/CRC001/2H/P2/VPS	N9123VN
X 2 ⚠	OWNER'S MANUAL	0VMN01842
X 3	RF CORD PAL 1.2M	WPZ0122LG001
X 4	DRY BATTERY UM-3(M) 2PCS PACK or	1790849
	DRY BATTERY UM3/RS6 2PCS PACK or	579W099
	DRY BATTERY R6P(AR) 2PX	XB0M451HU002
X 10	ACCESSORY BAG	0VM404632

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that not assigned part numbers (————) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C..........±0.25% D..........±0.5% F..........±1%
G..........±2% J..........±5% K..........±10%
M..........±20% N..........±30% Z..........+80/-20%

MCV CBA

Ref. No.	Description	Part No.
	MCV CBA **Consists of the following:**	0VSA07886
	Main CBA (MCV-A)	————
	Function CBA (MCV-B)	————
	IF CBA (IFV)	0VSA07729

Main CBA (MCV-A)

Ref. No.	Description	Part No.
	Main CBA (MCV-A) **Consists of the following:**	————
	CAPACITORS	
C 001 ⚠	METALLIZED FILM CAP. 0.047µF/250V K or	CT2E473NC011
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473MS001
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473UN009
	METALLIZED FILM CAP. 0.047µF/275V K or	CT2E473DT001
	METALLIZED FILM CAP. 0.047µF/250V K	CT2E473NC004
C 002 ⚠	METALLIZED FILM CAP. 0.047µF/250V K or	CT2E473NC011
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473MS001
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473UN009
	METALLIZED FILM CAP. 0.047µF/275V K or	CT2E473DT001
	METALLIZED FILM CAP. 0.047µF/250V K	CT2E473NC004
C 003 ⚠	SAFETY CAP. 2200pF/400V M or	CCN2HMA0E222
	SAFETY CAP. 2200pF/400V M	CCN2HMP0E222
C 004	ELECTROLYTIC CAP. 22µF/400V M or	CA2H220NC010
	ELECTROLYTIC CAP. 22µF/400V M	CA2H220SP027
C 005	CERAMIC CAP. 0.01µF/500V or	CA2J103TU001
	CERAMIC CAP. B K 0.01µF/500V or	CCD2JKD0B103
	CERAMIC CAP. B K 0.01µF/500V	CCD2JKP0B103
C 006	CERAMIC CAP. SL J 120pF/1KV or	CA3A121MR506
	CERAMIC CAP. SL K 120pF/1KV	CCD3AKPSL121
C 007	SEMICONDUCTOR CAP. SR K 0.039µF/25V or	CDA1EKS0X393
	SEMICONDUCTOR CAP. SR K 0.039µF/25V	12Y2393S
C 008	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033µF/16V	3X4C332T
C 009	CERAMIC CAP.(AX) X K 4700pF/16V or	CDA1CKT0X472
	CERAMIC CAP. X K 0.0047µF/16V	3X4C472T
C 010	SEMICONDUCTOR CAP. SR K 0.022µF/25V or	CDA1EKS0X223
	SEMICONDUCTOR CAP. SR K 0.022µF/25V	12Y2223S
C 011	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C 012	ELECTROLYTIC CAP. 470µF/16V M	CE1CMASDL471
C 013	ELECTROLYTIC CAP. 22µF/50V M	CE1JMASDL220
C 014	ELECTROLYTIC CAP. 330µF/16V M	CE1CMASDL331
C 015	ELECTROLYTIC CAP. 330µF/16V M	CE1CMASDL331
C 016	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C 017	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C 018	CERAMIC CAP. F Z 0.01µF/50V	CCD1JZS0F103
C 019	SEMICONDUCTOR CAP. SR K 0.022µF/25V or	CDA1EKS0X223
	SEMICONDUCTOR CAP. SR K 0.022µF/25V	12Y2223S
C 021	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 022	* MYLAR CAP. 0.0012µF/100V J or	CMA2AJS00122
	MYLAR CAP. 0.0012µF/100V J	1255122S
C 051	ELECTROLYTIC CAP. 0.47µF/50V M H7 or	CE1JMASSLR47
	ELECTROLYTIC CAP. 0.47µF/50V M H7	526W474S
C 053	CERAMIC CAP.(AX) B J 470pF/50V or	CCA1JJT0B471
	CERAMIC CAP.(AX) B K 470pF/50V or	CCA1JKT0B471
	CERAMIC CAP. B J 470pF/50V or	3B41471T
	CERAMIC CAP. B K 470pF/50V	3B42471T
C 054	ELECTRIC DOUBLE LAYER CAP. 0.022F/5.5V Z	CA0J223NE003
C 055	ELECTROLYTIC CAP. 47µF/6.3V M	CE0KMASDL470
C 056	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C 060	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 061	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 062	CERAMIC CAP.(AX) Y M 0.01µF/16V	CDA1CMT0Y103
C 301	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 302	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 303	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 304	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 305	CERAMIC CAP.(AX) SL J 56pF/50V or	CCA1JJTSL560
	CERAMIC CAP. SL J 56pF/50V	3S41560T
C 306	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 307	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 308	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 309	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 310	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 311	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 312	CERAMIC CAP.(AX) Y M 0.01µF/16V	CDA1CMT0Y103
C 313	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 317	CERAMIC CAP.(AX) B J 220pF/50V or	CCA1JJT0B221
	CERAMIC CAP.(AX) B K 220pF/50V or	CCA1JKT0B221
	CERAMIC CAP. B J 220pF/50V or	3B41221T

* Mylar is a registered trademark of E. I. DuPont de Nemours and Company.

Ref. No.	Description	Part No.
	CERAMIC CAP. B K 220pF/50V	3B42221T
C 318	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JJT0B101
	CERAMIC CAP.(AX) B K 100pF/50V or	CCA1JKT0B101
	CERAMIC CAP. B J 100pF/50V or	3B41101T
	CERAMIC CAP. B K 100pF/50V	3B42101T
C 319	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 320	CERAMIC CAP.(AX) B J 270pF/50V or	CCA1JJT0B271
	CERAMIC CAP.(AX) B K 270pF/50V or	CCA1JKT0B271
	CERAMIC CAP. B J 270pF/50V or	3B41271T
	CERAMIC CAP. B K 270pF/50V	3B42271T
C 322	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C 323	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C 325	CERAMIC CAP.(AX) B J 180pF/50V or	CCA1JJT0B181
	CERAMIC CAP.(AX) B K 180pF/50V or	CCA1JKT0B181
	CERAMIC CAP. B J 180pF/50V or	3B41181T
	CERAMIC CAP. B K 180pF/50V	3B42181T
C 326	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 327	CERAMIC CAP.(AX) SL J 47pF/50V or	CCA1JJTSL470
	CERAMIC CAP. SL J 47pF/50V	3S41470T
C 328	CERAMIC CAP.(AX) SL J 68pF/50V or	CCA1JJTSL680
	CERAMIC CAP. SL J 68pF/50V	3S41680T
C 329	CERAMIC CAP.(AX) SL J 22pF/50V or	CCA1JJTSL220
	CERAMIC CAP. SL J 22pF/50V	3S41220T
C 330	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 331	CERAMIC CAP.(AX) B J 390pF/50V or	CCA1JJT0B391
	CERAMIC CAP.(AX) B K 390pF/50V or	CCA1JKT0B391
	CERAMIC CAP. B J 390pF/50V or	3B41391T
	CERAMIC CAP. B K 390pF/50V	3B42391T
C 332	CERAMIC CAP.(AX) SL J 18pF/50V or	CCA1JJTSL180
	CERAMIC CAP. SL J 18pF/50V	3S41180T
C 333	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JJT0B101
	CERAMIC CAP.(AX) B K 100pF/50V or	CCA1JKT0B101
	CERAMIC CAP. B J 100pF/50V or	3B41101T
	CERAMIC CAP. B K 100pF/50V	3B42101T
C 334	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C 335	ELECTROLYTIC CAP. 10μF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10μF/16V M H7	526T106S
C 336	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 337	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 338	CERAMIC CAP.(AX) F Z 0.022μF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022μF/25V	1220843T
C 339	CERAMIC CAP. F Z 0.01μF/50V	CCD1JZS0F103
C 340	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 344	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 345	SEMICONDUCTOR CAP. SR K 0.01μF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01μF/25V	12Y2103S
C 346	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 347	ELECTROLYTIC CAP. 10μF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10μF/16V M H7	526T106S
C 348	ELECTROLYTIC CAP. 4.7μF/50V M H7 or	CE1JMASSL4R7
	ELECTROLYTIC CAP. 4.7μF/50V M H7	526W475S
C 349	ELECTROLYTIC CAP. 220μF/6.3V M H7 or	CE0KMASSL221
	ELECTROLYTIC CAP. 220μF/6.3V M H7	526R227S
C 350	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 351	ELECTROLYTIC CAP. 4.7μF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7μF/25V M H7	526U475S
C 352	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 353	CERAMIC CAP.(AX) F Z 0.022μF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022μF/25V	1220843T
C 354	ELECTROLYTIC CAP. 4.7μF/25V M H7 or	CE1EMASSL4R7

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 4.7μF/25V M H7	526U475S
C 355	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 361	ELECTROLYTIC CAP. 22μF/10V M	CE1AMASDL220
C 362	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 363	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022μF/16V	3X4C222T
C 364	PCB JUMPER D0.6-P5.0	JW5.0T
C 365	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 366	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 367	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 368	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 370	SEMICONDUCTOR CAP. SR K 0.01μF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01μF/25V	12Y2103S
C 371	CERAMIC CAP.(AX) SL J 12pF/50V or	CCA1JJTSL120
	CERAMIC CAP. SL J 12pF/50V	3S41120T
C 372	CERAMIC CAP.(AX) SL J 15pF/50V or	CCA1JJTSL150
	CERAMIC CAP. SL J 15pF/50V	3S41150T
C 373	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 374	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 380	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 388	CERAMIC CAP.(AX) SL J 56pF/50V or	CCA1JJTSL560
	CERAMIC CAP. SL J 56pF/50V	3S41560T
C 401	MYLAR CAP. 0.022μF/100V J or	CMA2AJS00223
	MYLAR CAP. 0.022μF/100V J	1255223S
C 402	ELECTROLYTIC CAP. 47μF/16V M H7 or	CE1CMASSL470
	ELECTROLYTIC CAP. 47μF/16V M H7	526T476S
C 403	SEMICONDUCTOR CAP. SR K 0.01μF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01μF/25V	12Y2103S
C 404	SEMICONDUCTOR CAP. SR K 0.01μF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01μF/25V	12Y2103S
C 405	ELECTROLYTIC CAP. 4.7μF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7μF/25V M H7	526U475S
C 406	ELECTROLYTIC CAP. 22μF/16V M H7 or	CE1CMASSL220
	ELECTROLYTIC CAP. 22μF/16V M H7	526T226S
C 407	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 408	CERAMIC CAP.(AX) B J 220pF/50V or	CCA1JJT0B221
	CERAMIC CAP.(AX) B K 220pF/50V or	CCA1JKT0B221
	CERAMIC CAP. B J 220pF/50V or	3B41221T
	CERAMIC CAP. B K 220pF/50V	3B42221T
C 409	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 410	CERAMIC CAP.(AX) X K 2700pF/16V or	CDA1CKT0X272
	CERAMIC CAP. X K 0.0027μF/16V	3X4C272T
C 411	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 412	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C 413	CERAMIC CAP.(AX) X K 6800pF/16V or	CDA1CKT0X682
	CERAMIC CAP. X K 0.0068μF/16V	3X4C682T
C 414	ELECTROLYTIC CAP. 4.7μF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7μF/25V M H7	526U475S
C 415	ELECTROLYTIC CAP. 0.1μF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1μF/50V M H7	526W104S
C 416	CERAMIC CAP.(AX) X K 1800pF/16V or	CDA1CKT0X182
	CERAMIC CAP. X K 0.0018μF/16V	3X4C182T
C 417	CERAMIC CAP.(AX) X K 1200pF/16V or	CDA1CKT0X122
	CERAMIC CAP. X K 0.0012μF/16V	3X4C122T
C 418	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 419	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 420	ELECTROLYTIC CAP. 10μF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10μF/16V M H7	526T106S

Ref. No.	Description	Part No.
C 421	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1μF/50V M H7	526W105S
C 501	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 502	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 503	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 504	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 506	ELECTROLYTIC CAP. 22μF/16V M H7 or	CE1CMASSL220
	ELECTROLYTIC CAP. 22μF/16V M H7	526T226S
C 508	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 509	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033μF/16V	3X4C332T
C 510	ELECTROLYTIC CAP. 47μF/6.3V M H7 or	CE0KMASSL470
	ELECTROLYTIC CAP. 47μF/6.3V M H7	526R476S
C 511	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 512	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033μF/16V	3X4C332T
C 513	CERAMIC CAP.(AX) X K 6800pF/16V or	CDA1CKT0X682
	CERAMIC CAP. X K 0.0068μF/16V	3X4C682T
C 514	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 515	ELECTROLYTIC CAP. 47μF/6.3V M H7 or	CE0KMASSL470
	ELECTROLYTIC CAP. 47μF/6.3V M H7	526R476S
C 516	CERAMIC CAP.(AX) B J 330pF/50V or	CCA1JJT0B331
	CERAMIC CAP.(AX) B K 330pF/50V or	CCA1JKT0B331
	CERAMIC CAP. B J 330pF/50V or	3B41331T
	CERAMIC CAP. B K 330pF/50V	3B42331T
C 518	CERAMIC CAP. F Z 0.01μF/50V	CCD1JZS0F103
C 519	ELECTROLYTIC CAP. 10μF/16V M LL H7 or	CA1C100SP018
	ELECTROLYTIC CAP. 10μF/16V M LL H7	CE1CMASHL100
C 520	CERAMIC CAP.(AX) B J 220pF/50V or	CCA1JJT0B221
	CERAMIC CAP.(AX) B K 220pF/50V or	CCA1JKT0B221
	CERAMIC CAP. B J 220pF/50V or	3B41221T
	CERAMIC CAP. B K 220pF/50V	3B42221T
C 521	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C 522	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C 523	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 524	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 525	ELECTROLYTIC CAP. 100μF/6.3V M H7 or	CE0KMASSL101
	ELECTROLYTIC CAP. 100μF/6.3V M H7	526R107S
C 526	CERAMIC CAP.(AX) F Z 0.022μF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022μF/25V	1220843T
C 527	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 528	ELECTROLYTIC CAP. 330μF/6.3V M H7 or	CE0KMASSL331
	ELECTROLYTIC CAP. 330μF/6.3V M H7	526R337S
C 529	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 530	CERAMIC CAP. F Z 0.01μF/50V (Used only if IC504B)	CCD1JZS0F103
C 531	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 532	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C 533	CERAMIC CAP.(AX) X K 1500pF/16V or	CDA1CKT0X152
	CERAMIC CAP. X K 0.0015μF/16V	3X4C152T
C 534	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 536	CERAMIC CAP.(AX) SL J 10pF/50V or	CCA1JJTSL100
	CERAMIC CAP. SL J 10pF/50V	3S41100T
C 537	ELECTROLYTIC CAP. 33μF/6.3V M	CE0KMASDL330
C 538	CERAMIC CAP.(AX) F Z 0.022μF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022μF/25V	1220843T
C 539	ELECTROLYTIC CAP. 22μF/10V M	CE1AMASDL220
C 540	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 541	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 547	CERAMIC CAP.(AX) X K 3900pF/16V or	CDA1CKT0X392
	CERAMIC CAP. X K 0.0039μF/16V	3X4C392T
C 548	CERAMIC CAP.(AX) X K 3900pF/16V or	CDA1CKT0X392
	CERAMIC CAP. X K 0.0039μF/16V	3X4C392T
C 549	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 671	SEMICONDUCTOR CAP. F Z 0.1μF/25V or	CDA1EZS0F104
	SEMICONDUCTOR CAP. F Z 0.1μF/25V	1220520S
C 701	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 702	CERAMIC CAP.(AX) F Z 0.047μF/50V	CCA1JZT0F473
C 703	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C 704	CERAMIC CAP.(AX) SL J 56pF/50V or	CCA1JJTSL560
	CERAMIC CAP. SL J 56pF/50V	3S41560T
C 705	ELECTROLYTIC CAP. 47μF/35V M	CE1GMASDL470
C 706	MYLAR CAP. 0.033μF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033μF/50V J	2254333S
C 707	MYLAR CAP. 0.033μF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033μF/50V J	2254333S
C 708	MYLAR CAP. 0.033μF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033μF/50V J	2254333S
C 710	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C 711	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 712	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022μF/16V	3X4C222T
C 713	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022μF/16V	3X4C222T
C 714	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022μF/16V	3X4C222T
C 716	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 717	ELECTROLYTIC CAP. 4.7μF/25V M	CE1EMASDL4R7
C 718	ELECTROLYTIC CAP. 4.7μF/25V M	CE1EMASDL4R7
C 719	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 720	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001μF/50V or	3B41102T
	CERAMIC CAP. B K 0.001μF/50V	3B42102T
C 721	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 722	ELECTROLYTIC CAP. 470μF/10V M	CE1AMASDL471
C 726	ELECTROLYTIC CAP. 4.7μF/25V M	CE1EMASDL4R7
C 751	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C 752	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033μF/16V	3X4C332T
C 753	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 754	CERAMIC CAP.(AX) B J 470pF/50V or	CCA1JJT0B471
	CERAMIC CAP.(AX) B K 470pF/50V or	CCA1JKT0B471
	CERAMIC CAP. B J 470pF/50V or	3B41471T
	CERAMIC CAP. B K 470pF/50V	3B42471T
C 755	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 756	CERAMIC CAP. F Z 0.01μF/50V	CCD1JZS0F103
C 758	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010

Ref. No.	Description	Part No.
	CONNECTORS	
CN 251	ANGLE SOCKET CONNECTOR, 3P	1770598
CN 301	STRAIGHT PIN CONNECTOR, 15P	1770635
CN 501	STRAIGHT PIN CONNECTOR, 20P	1770640
CN 502	STRAIGHT PIN CONNECTOR, 3P	1770623
CN 503	STRAIGHT PIN HEADER, 2P	1740764
CN 671	STRAIGHT PIN CONNECTOR, 9P	1770629
	DIODES	
D 001	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 002	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 003	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 004	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 005	RECTIFIER DIODE EG01C or	QDPZ000EG01C
	FAST RECOVERY DIODE AP01C or	AAP01C000000
	RECTIFIER DIODE ERA22-10Y2(TYPE I) or	QDQZ0ERA2210
	FAST RECOVERY DIODE RGP10K	ND8Z00RGP10K
D 006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 007	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 008	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 009	RECTIFIER DIODE EG01C or	QDPZ000EG01C
	FAST RECOVERY DIODE AP01C or	AAP01C000000
	RECTIFIER DIODE ERA22-10Y2(TYPE I) or	QDQZ0ERA2210
	FAST RECOVERY DIODE RGP10K	ND8Z00RGP10K
D 010	RECTIFIER DIODE RU3YX LF-C4 or	QD7Z000RU3YX
	FAST RECOVERY DIODE EGP20B or	NDQB000EGP20
	FAST RECOVERY DIODE EGP20D	NDQD000EGP20
D 011	SWITCHING DIODE MA188 or	QDTZ000MA188
	SWITCHING DIODE BAV21	NDQZ000BAV21
D 012	SCHOTTKY BARRIER DIODE AK04 or	QDQZ0000AK04
	SCHOTTKY BARRIER DIODE ERA81-004 or	QDQZERA81004
	SCHOTTKY BARRIER DIODE 11EQS04 or	QD4Z011EQS04
	SCHOTTKY BARRIER DIODE SB040	NDQZ000SB040
D 013	SWITCHING DIODE MA178 or	QDTZ000MA178
	SWITCHING DIODE BAV18	NDQZ000BAV18
D 016	ZENER DIODE UZ-6.8BSA	QDTA0UZ6R8BS
D 051	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 052	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 054	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 055	ZENER DIODE UZ-9.1BSC	QDTC0UZ9R1BS
D 057	ZENER DIODE UZ-30BSA	QDTA00UZ30BS
D 058	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 059	ZENER DIODE UZ-9.1BSC	QDTC0UZ9R1BS
D 301	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 303	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 305	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 307	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 309	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 501	LED SID1K10CXM or	QP4ZD1K10CXM
	LED LN66A.FN or	QP7Z000LN66A
	LED SLR-932C-20-AB or	QPQ80SLR932C
	LED L-1543F3C	NP4ZL1543F3C
D 502	LED SLR-981A or	QPQA00SLR981
	LED SLR-981B or	QPQB00SLR981
	LED SLR-981C	QPQC00SLR981
D 504	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 505	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 506	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 507	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 508	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 701	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 702	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 703	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 751	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 752	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 753	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 754	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 755	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
	ICS	
IC 001 ⚠	PHOTO COUPLER PC120F or	QPEZ00PC120F
	PHOTOCOUPLER PC120 or	QP5Z000PC120
	PHOTOCOUPLER PS2561-1M or	QPEM0PS25611
	PHOTOCOUPLER PS2561-1D or	QPED0PS25611
	PHOTOCOUPLER PS2561-1H or	QPEH0PS25611
	PHOTOCOUPLER PS2561-1W or	QPEW0PS25611
	PHOTOCOUPLER PC123F or	QPEZ00PC123F
	PHOTOCOUPLER PC123	QPEZ000PC123
IC 002	IC KIA431 or	NSZLA0ZJY001
	IC KA431Z or	NSZLA0ZSM001
	IC L5431 or	QSZLA0ZSY004
	IC AN1431T-(NSC)	QSBLA0ZMS001
IC 301	IC, VIDEO LA7347	QSZLA0SSY006
IC 302	IC, CCD LC89975M	QSMLA0SSY019
IC 401	IC:AUDIO LA7286	QSZLA0SSY007
IC 501	MICROCONTROLLER 8BIT SY/CXP8824-114Q or	QSMQA0RSN051

Ref. No.	Description	Part No.
	MICROCONTROLLER 8BIT SY/CXP8824-115Q	QSMQB0RSN051
IC 502	IC:COMPARATOR KIA339P or	NSBLA0SJY019
	IC:COMPARATOR KA339 or	NSBLA0SSM002
	IC:COMPARATOR NJM2901N	QSBLA0SJR040
IC 503	IC:OP-AMP. KIA324P DIP-14 or	NSBLA0SJY002
	IC:OP-AMP. KA324	NSBLA0SSM001
IC 505	IC:MEMORY X24C02P or	QSMMA0SXC001
	IC ST24C02A-B1 or	GST24C02AB10
	IC:MEMORY 24LC02B/P	NSMMA0SMH003
IC 701	ZENER DIODE UZT33MTA	QCTZ00UZT33M
IC 751	IC NJU4052BD or	14D0438
	IC UPD4052BC or	QSMLA0SNE004
	IC TC4052BP or	QSMLA0STS003
	IC HEF4052BP	NSMLA0SPH001
IC504A	IC TA7291S (Not used C530)	14LW342
IC504B	IC LB1641 (Used C530)	QSBLA0SSY045
	COILS	
L 001 ⚠	LINE FILTER FK0B160MH16 or	1170567
	LINE FILTER TL81-015-102	LLBT00ZPC002
L 002 ⚠	LINE FILTER 51MH UU10LF or	LLBG00ZSF003
	LINE FILTER 51MH 53230 or	LLBG00ZKT002
	LINE FILTER 51MH UU10.5-51MH	LLBG00ZF8003
L 003	LEAD INDUCTOR 22µH-K or	LLARKMUTU220
	LEAD INDUCTOR 22µH-K or	LLARKMPKV220
	LEAD INDUCTOR 22µH-K	LLARKMPFG220
L 004	LEAD INDUCTOR 22µH-K or	LLARKMUTU220
	LEAD INDUCTOR 22µH-K or	LLARKMPKV220
	LEAD INDUCTOR 22µH-K	LLARKMPFG220
L 005	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 006	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 007	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 008	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 051	PCB JUMPER D0.6-P5.0	JW5.0T
L 053	INDUCTOR 47µH-K	LLAXKCPFG470
L 301	INDUCTOR 180µH-K-26T or	LLAXKDTKA181
	INDUCTOR 180µH-K-26T	LLAXKATTU181
L 302	INDUCTOR 82µH-K	LLAXKCPFG820
L 303	INDUCTOR 330µH-K-26T or	LLAXKDTKA331
	INDUCTOR 330µH-K-26T	LLAXKATTU331
L 304	INDUCTOR 56µH-K	LLAXKCPFG560
L 305	INDUCTOR 10µH-K-26T or	LLAXKDTKA100
	INDUCTOR 10µH-K-26T	LLAXKATTU100
L 306	INDUCTOR 27µH-K	LLAXKCPFG270
L 308	INDUCTOR 330µH-K-26T or	LLAXKDTKA331
	INDUCTOR 330µH-K-26T	LLAXKATTU331
L 309	INDUCTOR 4.7µH-K-5FT or	LLARKDSKA4R7
	INDUCTOR 4.7µH-K-5FT or	LLARKBSTU4R7
	INDUCTOR 4.7µH-K-5FT or	LLARKMSFS4R7
	INDUCTOR 4.7µH-K	LLAXKCPFG4R7
L 310	INDUCTOR 68µH-K	LLAXKCPFG680
L 311	INDUCTOR 27µH-K	LLAXKCPFG270
L 312	INDUCTOR 68µH-K	LLAXKCPFG680
L 316	INDUCTOR 47µH-K-5FT or	LLARKDSKA470
	INDUCTOR 47µH-K-5FT or	LLARKBSTU470
	INDUCTOR 47µH-K-5FT or	LLARKMSFS470
	INDUCTOR 47µH-K	LLAXKCPFG470
L 318	INDUCTOR 10µH-K-26T or	LLAXKDTKA100
	INDUCTOR 10µH-K-26T	LLAXKATTU100
L 319	INDUCTOR 47µH-K	LLAXKCPFG470
L 320	PCB JUMPER D0.6-P5.0	JW5.0T
L 321	PCB JUMPER D0.6-P5.0	JW5.0T
L 401	INDUCTOR 10µH-K-26T or	LLAXKDTKA100

Ref. No.	Description	Part No.
	INDUCTOR 10µH-K-26T	LLAXKATTU100
L 501	INDUCTOR 56µH-K-5FT or	LLARKDSKA560
	INDUCTOR 56µH-K-5FT or	LLARKBSTU560
	INDUCTOR 56µH-K-5FT or	LLARKMSFS560
	INDUCTOR 56µH-K	LLAXKCPFG560
L 502	INDUCTOR 15µH-K-26T or	LLAXKDTKA150
	INDUCTOR 15µH-K-26T	LLAXKATTU150
L 701	PCB JUMPER D0.6-P5.0	JW5.0T
L 702	INDUCTOR 47µH-K-5FT or	LLARKDSKA470
	INDUCTOR 47µH-K-5FT or	LLARKBSTU470
	INDUCTOR 47µH-K-5FT or	LLARKMSFS470
	INDUCTOR 47µH-K	LLAXKCPFG470
L 703	PCB JUMPER D0.6-P5.0	JW5.0T
T 401	COIL, OSC 1027QM30003B7- or	LFA07V0VD003
	COIL, OSC R-12 P687 X or	LFA07V0MM045
	COIL, OSC 7L1A35N	LFA07V0LH002
	TRANSISTOR	
Q 002 ⚠	TRANSISTOR 2SC4517 or	QQPZ02SC4517
	TRANSISTOR 2SC5239 or	QQQZ02SC5239
	TRANSISTOR 2SC3866	QQPZ02SC3866
Q 011	TRANSISTOR 2SC4204 or	QQSZ02SC4204
	TRANSISTOR 2SC3576	QQSZ02SC3576
Q 051	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 052	TRANSISTOR 2SD400(F)	D400FZ
Q 053	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 054	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR KSR2203 or	NQSZ0KSR2203
	RES. BUILT-IN TRANSISTOR 2SA1346	A1346Z
Q 055	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 056	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 057	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 058	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 061	TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
	TRANSISTOR 2SD734F-NP-AQ or	QQSF002SD734
	TRANSISTOR 2SD734G-NP-AQ or	QQSG002SD734
	TRANSISTOR 2SC2120-Y	QQSY02SC2120
Q 301	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 302	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 303	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 307	RES. BUILT-IN TRANSISTOR KRC106M or	NQSZ0KRC106M
	RES. BUILT-IN TRANSISTOR KSR1214 or	NQSZ0KSR1214

Ref. No.	Description	Part No.
	RES. BUILT-IN TRANSISTOR 2SC4133	QQSZ02SC4133
Q 308	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 309	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KSA1175(Y) or	NQSY0KSA1175
	TRANSISTOR KSA1175(G) or	NQSG0KSA1175
	TRANSISTOR 2SA608SP(E) or	A608SEZ
	TRANSISTOR 2SA608SP(F)	A608SFZ
Q 310	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KSA1175(Y) or	NQSY0KSA1175
	TRANSISTOR KSA1175(G) or	NQSG0KSA1175
	TRANSISTOR 2SA608SP(E) or	A608SEZ
	TRANSISTOR 2SA608SP(F)	A608SFZ
Q 311	RES. BUILT-IN TRANSISTOR KRA109M or	NQSZ0KRA109M
	RES. BUILT-IN TRANSISTOR KSR2208 or	NQSZ0KSR2208
	RES. BUILT-IN TRANSISTOR 2SA1347	QQSZ02SA1347
Q 312	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 319	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 320	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 401	TRANSISTOR 2SC3331(T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331(U)	QSC3331UNPAA
Q 501	PHOTO TRANSISTOR ST-316R2-B	QP4B0ST316R2
Q 502	PHOTO TRANSISTOR ST-316R2-B	QP4B0ST316R2
Q 503	PHOTO TRANSISTOR ST-316R2-B	QP4B0ST316R2
Q 506	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR KSR2203 or	NQSZ0KSR2203
	RES. BUILT-IN TRANSISTOR 2SA1346	A1346Z
Q 507	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 508	TRANSISTOR KTC3199(BL) or	NQS50KTC3199
	TRANSISTOR KSC2785(L) or	NQSL0KSC2785
	TRANSISTOR 2SC536SP(G)	QQSGSC536SPA
Q 702	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 703	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 704	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 705	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 751	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
	RESISTORS	
R 002	FIXED METAL OXIDE FILM RES. 2W J 82K Ω or	1330513
	FIXED METAL OXIDE FILM RES. 2W J 82K Ω or	RN02JZPZ0823
	FIXED METAL OXIDE FILM RES. 2W J 82K Ω	RN02823KE009
R 004	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 005	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 006	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 007	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 008	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 009	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 010	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 011	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 012	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 017	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 018	CARBON RES. 1/4W J 2.7 Ω	RCX4JATZ02R7
R 019	CARBON RES. 1/4W J 2.7 Ω	RCX4JATZ02R7
R 020	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 021	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 023	CARBON RES. 1/4W G 2.2K Ω	RCX4GATZ0222
R 024	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 025	CARBON RES. 1/4W G 2K Ω	RCX4GATZ0202
R 051	CARBON RES. 1/4W J 68K Ω	RCX4JATZ0683
R 052	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 054	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 055	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 056	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 057	CARBON RES. 1/4W J 1.3K Ω or	RCX4JATZ0132
	CARBON RES. 1/6W J 1.3K Ω	RCX6JATZ0132
R 058	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 059	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 060	PCB JUMPER D0.6-P5.0	JW5.0T
R 061	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 062	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 064	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 065	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 066	CARBON RES. 1/4W J 56 Ω or	RCX4JATZ0560
	CARBON RES. 1/6W J 56 Ω	RCX6JATZ0560
R 067	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 073	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 074	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 075	PCB JUMPER D0.6-P5.0	JW5.0T
R 301	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 302	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 303	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 304	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 305	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 306	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 307	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 308	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 309	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 310	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 311	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 312	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 313	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 315	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334

Ref. No.	Description	Part No.
R 316	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 317	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 319	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω	RCX6JATZ0273
R 320	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 321	CARBON RES. 1/4W J 6.8K Ω or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8K Ω	RCX6JATZ0682
R 322	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 323	PCB JUMPER D0.6-P5.0	JW5.0T
R 324	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 326	CARBON RES. 1/4W J 15K Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15K Ω	RCX6JATZ0153
R 327	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 328	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 329	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R 331	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 332	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 334	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 335	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 336	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 337	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 338	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 339	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 340	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 341	CARBON RES. 1/4W J 560 Ω or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 Ω	RCX6JATZ0561
R 342	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 344	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 349	CARBON RES. 1/4W J 1M Ω or	RCX4JATZ0105
	CARBON RES. 1/6W J 1M Ω	RCX6JATZ0105
R 350	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 351	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 353	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R 354	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 355	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 356	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 357	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 358	PCB JUMPER D0.6-P5.0	JW5.0T
R 359	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 360	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 361	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 362	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 363	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 364	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223

Ref. No.	Description	Part No.
R 371	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 372	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 373	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 374	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 375	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 376	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 377	CARBON RES. 1/4W J 270 Ω or	RCX4JATZ0271
	CARBON RES. 1/6W J 270 Ω	RCX6JATZ0271
R 378	PCB JUMPER D0.6-P5.0	JW5.0T
R 379	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 380	CARBON RES. 1/4W J 270 Ω or	RCX4JATZ0271
	CARBON RES. 1/6W J 270 Ω	RCX6JATZ0271
R 401	CARBON RES. 1/4W J 15 Ω	RCX4JATZ0150
R 402	CARBON RES. 1/4W J 180 Ω or	RCX4JATZ0181
	CARBON RES. 1/6W J 180 Ω	RCX6JATZ0181
R 403	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R 404	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 405	CARBON RES. 1/4W J 4.7 Ω or	RCX4JATZ04R7
	CARBON RES. 1/6W J 4.7 Ω	RCX6JATZ04R7
R 406	CARBON RES. 1/4W J 150K Ω or	RCX4JATZ0154
	CARBON RES. 1/6W J 150K Ω	RCX6JATZ0154
R 407	CARBON RES. 1/4W J 120 Ω or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 Ω	RCX6JATZ0121
R 408	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 409	CARBON RES. 1/4W J 12K Ω or	RCX4JATZ0123
	CARBON RES. 1/6W J 12K Ω	RCX6JATZ0123
R 410	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 411	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 412	CARBON RES. 1/4W J 6.8K Ω or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8K Ω	RCX6JATZ0682
R 413	CARBON RES. 1/4W J 15K Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15K Ω	RCX6JATZ0153
R 414	CARBON RES. 1/4W J 1.8M Ω or	RCX4JATZ0185
	CARBON RES. 1/6W J 1.8M Ω	RCX6JATZ0185
R 415	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 416	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 417	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 418	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 419	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 420	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 421	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 456	PCB JUMPER D0.6-P5.0	JW5.0T
R 502	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 503	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 504	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 505	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 506	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 507	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 508	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 509	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 510	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 511	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 512	CARBON RES. 1/4W J 4.7M Ω or	RCX4JATZ0475
	CARBON RES. 1/6W J 4.7M Ω	RCX6JATZ0475
R 513	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 514	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 515	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 516	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 517	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 518	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 519	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 520	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 521	CARBON RES. 1/4W J 120K Ω or	RCX4JATZ0124
	CARBON RES. 1/6W J 120K Ω	RCX6JATZ0124
R 522	CARBON RES. 1/4W J 56K Ω or	RCX4JATZ0563
	CARBON RES. 1/6W J 56K Ω	RCX6JATZ0563
R 524	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 525	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 526	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R 527	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 528	CARBON RES. 1/4W J 39K Ω or	RCX4JATZ0393
	CARBON RES. 1/6W J 39K Ω	RCX6JATZ0393
R 529	CARBON RES. 1/4W J 39K Ω or	RCX4JATZ0393
	CARBON RES. 1/6W J 39K Ω	RCX6JATZ0393
R 530	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 531	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 532	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 533	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 534	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 535	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 536	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 540	CARBON RES. 1/4W J 3.3K Ω or	RCX4JATZ0332
	CARBON RES. 1/6W J 3.3K Ω	RCX6JATZ0332
R 541	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 542	CARBON RES. 1/4W J 560K Ω or	RCX4JATZ0564
	CARBON RES. 1/6W J 560K Ω	RCX6JATZ0564
R 543	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 544	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 550	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 551	PCB JUMPER D0.6-P5.0	JW5.0T
R 552	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 553	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 554	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 555	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 559	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 563	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 564	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 565	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 567	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 568	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 571	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 575	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103

Ref. No.	Description	Part No.
R 576	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 579	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 580	CARBON RES. 1/4W J 18K Ω or	RCX4JATZ0183
	CARBON RES. 1/6W J 18K Ω	RCX6JATZ0183
R 581	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 582	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 583	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 585	CARBON RES. 1/4W J 1.5K Ω	RCX4JATZ0152
R 586	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 587	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 588	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 589	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 590	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 591	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 592	PCB JUMPER D0.6-P5.0	JW5.0T
R 593	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 594	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 595	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R 596	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 597	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 598	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 599	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R 600	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 601	CARBON RES. 1/4W J 12K Ω or	RCX4JATZ0123
	CARBON RES. 1/6W J 12K Ω	RCX6JATZ0123
R 607	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 608	PCB JUMPER D0.6-P5.0	JW5.0T
R 703	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 704	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 705	CARBON RES. 1/4W J 33K Ω or	RCX4JATZ0333
	CARBON RES. 1/6W J 33K Ω	RCX6JATZ0333
R 706	CARBON RES. 1/4W J 2.4K Ω	RCX4JATZ0242
R 707	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 708	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 709	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 710	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 711	CARBON RES. 1/4W J 12K Ω or	RCX4JATZ0123
	CARBON RES. 1/6W J 12K Ω	RCX6JATZ0123
R 712	CARBON RES. 1/4W J 75 Ω or	RCX4JATZ0750
	CARBON RES. 1/6W J 75 Ω	RCX6JATZ0750
R 713	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 751	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 752	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 753	CARBON RES. 1/4W J 68 Ω or	RCX4JATZ0680
	CARBON RES. 1/6W J 68 Ω	RCX6JATZ0680
R 754	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 755	CARBON RES. 1/4W J 68 Ω or	RCX4JATZ0680
	CARBON RES. 1/6W J 68 Ω	RCX6JATZ0680
R 756	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 758	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω	RCX6JATZ0273
R 759	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω	RCX6JATZ0273

Ref. No.	Description	Part No.
R 760	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 761	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 762	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 763	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 764	CARBON RES. 1/4W J 560 Ω or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 Ω	RCX6JATZ0561
R 765	CARBON RES. 1/4W J 36K Ω or	RCX4JATZ0363
	CARBON RES. 1/6W J 36K Ω	RCX6JATZ0363
R 766	PCB JUMPER D0.6-P5.0	JW5.0T
J 35	CARBON RES. 1/4W J 2.2K Ω or	RCX4JZPZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JZPZ0222
	SWITCHES	
SW 501	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 502	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 504	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 505	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 506	TACT SWITCH KSM0611B	SST0101HH004
SW 507	PUSH SWITCH SPPB61 or	SSP0102AL001
	PUSH SWITCH JPS1120-0601H	SSP0102SR001
	VARIABLE RESISTORS	
VR 301	CARBON P.O.T. 4.7K Ω B or	638A472
	CARBON P.O.T. 5K Ω B or	VRCB502KA011
	CARBON P.O.T. 5K Ω B or	138N780
	CARBON P.O.T. 5K Ω B	VRCB502HH005
VR 302	CARBON P.O.T. 2.2K Ω B or	638A222
	CARBON P.O.T. 2K Ω B or	VRCB202KA011
	CARBON P.O.T. 2K Ω B or	138N778
	CARBON P.O.T. 2K Ω B	VRCB202HH005
VR 501	CARBON P.O.T. 100K Ω B or	638A104
	CARBON P.O.T. 100K Ω B or	VRCB104KA011
	CARBON P.O.T. 100K Ω B or	138N785
	CARBON P.O.T. 100K Ω B	VRCB104HH005
	MISCELLANEOUS	
2B 5	HOLDER, F.I.P.(R)	0VM302619
2B 6	HOLDER, F.I.P.(L)	0VM302618
2B 8	BUSH, LED(B)	6N50114
2B 11	HOLDER, IF SENSOR (Used only if RS501:NJL51V367)	0VM407020
2B 15	PLATE, GROUND, TUNER	0VM407332
2L 071	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
A 17	JACK BOARD(BG)	0VM302625
A 19	JACK BOARD(21P)	0VM201920
AC 001	AC CORD LA-1517-1	WAE0202LW011

Ref. No.	Description	Part No.
F 001 ⚠	FUSE T1.60AH250V or	PAGC20BAG162
	FUSE T1.60AH250V	PBGZ20CDX006
FH 001	FUSE HOLDER FH-V-03078-1 or	XH01Z00DK002
	HOLDER, FUSE CNT41-0014	1790424
FH 002	FUSE HOLDER FH-V-03078-1 or	XH01Z00DK002
	HOLDER, FUSE CNT41-0014	1790424
FP 501	F.I.P. 10-BT-119G or	TVFD1C0FT024
	F.I.P. FIP10BTM6	TVFD1C0NE025
JK 751	SKIRT JACK, 21P CSS5021-1701R	JGZL210SR001
MD 701	RF MODULATOR PAL(G) NJH3032G007	URFCPLGJR001
RS 501	REMOTE RECEIVER PIC-12042LFB (Not used 2B11)	USESJRSKK018
RS 501	REMOTE RECEIVER NJL51V367 (Used 2B11)	USESJRSJR009
T 001 ⚠	PULSE TRANS S1468B	LTT00EPSA009
TU 701	TUNER UNIT TELE4-025A	UTUNPLBAL005
X 301	CRYSTAL OSCILLATOR 4.433619MHZ or	1811388
	CRYSTAL OSCILLATOR 4.433619MHZ or	1811366
	CRYSTAL OSCILLATOR 4.433619MHZ	FXC445LGM001
X 501	CRYSTAL OSCILLATOR 32KHZ(10PPM) or	1811350
	CRYSTAL OSCILLATOR 32KHZ(10PPM)	1811351
	RF CABLE	WPZ0050LG001
	LEAD CLAMPER or	1790356
	LEAD CLAMPER GT-80M	XF00080HL001

Function CBA(MCV-B)

Ref. No.	Description	Part No.
	Function CBA (MCV-B) **Consists of the following:**	———
	CONNECTOR	
CN 251	ANGLE SOCKET CONNECTOR, 3P	1770598
	RESISTORS	
R 257	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 258	CARBON RES. 1/4W J 3.9K Ω or	RCX4JATZ0392
	CARBON RES. 1/6W J 3.9K Ω	RCX6JATZ0392
R 259	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 260	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 273	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 274	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 275	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 281	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 282	CARBON RES. 1/4W J 1K Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1K Ω	RCX6JATZ0102
R 286	CARBON RES. 1/4W J 3.9K Ω or	RCX4JATZ0392
	CARBON RES. 1/6W J 3.9K Ω	RCX6JATZ0392
	SWITCHES	
SW 258	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 259	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 260	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013

Ref. No.	Description	Part No.
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 262	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 273	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 274	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 277	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 281	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 285	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021
SW 286	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K or	SST0101MS017
	TACT SWITCH EVQ JAC 09K	SST0101MS021

IF CBA(IFV)

Ref. No.	Description	Part No.
	IF CBA (IFV) **Consists of the following:**	0VSA07729
	CAPACITORS	
C 02	CHIP CERAMIC CAP. CK C 1pF/50V	CHE1JC8CK1R0
C 03	CHIP CERAMIC CAP. CK C 1pF/50V	CHE1JC8CK1R0
C 07	CHIP CERAMIC CAP. B K 2200pF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B K 0.0022μF/50V	12B3222C
C 09	CHIP CERAMIC CAP. CK C 1pF/50V	CHE1JC8CK1R0
C 10	CHIP CERAMIC CAP. CJ C 3pF/50V	CHE1JC8CJ3R0
C 11	CHIP CERAMIC CAP. B K 0.022μF/50V or	CHE1JK80B223
	CHIP CERAMIC CAP. B K 0.022μF/50V	12B3223C
C 12	CHIP CERAMIC CAP. CH J 100pF/50V or	CHE1JJ8CH101
	CHIP CERAMIC CAP. CH J 100pF/50V	12CH101C
C 13	CHIP CERAMIC CAP. F Z 0.01μF/50V or	CHE1JZ80F103
	CHIP CERAMIC CAP. F Z 0.01μF/50V	12F3103C
C 14	CHIP CERAMIC CAP. SL J 330pF/50V or	CHE1JJ8SL331
	CHIP CERAMIC CAP. SL J 330pF/50V	1270331C
C 15	CHIP CERAMIC CAP. B K 2200pF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B K 0.0022μF/50V	12B3222C
C 16	CHIP CERAMIC CAP. B K 2200pF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B K 0.0022μF/50V	12B3222C
C 17	CHIP CERAMIC CAP. CH J 18pF/50V or	CHE1JJ8CH180
	CHIP CERAMIC CAP. CH J 18pF/50V	12CH180C
C 18	CHIP CERAMIC CAP. F Z 0.01μF/50V or	CHE1JZ80F103
	CHIP CERAMIC CAP. F Z 0.01μF/50V	12F3103C
C 19	CHIP CERAMIC CAP. CH J 47pF/50V or	CHE1JJ8CH470
	CHIP CERAMIC CAP. CH J 47pF/50V	12CH470C
C 20	CHIP CERAMIC CAP. PH J 36pF/50V	CHE1JJ3PH360
C 21	CHIP CERAMIC CAP. F Z 0.047μF/50V or	CHE1JZ80F473
	CHIP CERAMIC CAP. F Z 0.047μF/50V	12F3473C
C 22	CHIP CERAMIC CAP. B K 2200pF/50V or	CHE1JK80B222
	CHIP CERAMIC CAP. B K 0.0022μF/50V	12B3222C
C 23	CHIP CERAMIC CAP. CH J 24pF/50V or	CHE1JJ8CH240
	CHIP CERAMIC CAP. CH J 24pF/50V	12CH240C
C 24	CHIP CERAMIC CAP. CH J 15pF/50V or	CHE1JJ8CH150
	CHIP CERAMIC CAP. CH J 15pF/50V	12CH150C
C 25	CHIP CERAMIC CAP. CH J 15pF/50V or	CHE1JJ8CH150
	CHIP CERAMIC CAP. CH J 15pF/50V	12CH150C
C 30	CHIP CERAMIC CAP. CH J 47pF/50V or	CHE1JJ8CH470
	CHIP CERAMIC CAP. CH J 47pF/50V	12CH470C
C 31	CHIP CERAMIC CAP. F Z 0.01μF/50V or	CHE1JZ80F103
	CHIP CERAMIC CAP. F Z 0.01μF/50V	12F3103C
C 51	ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
C 52	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C 53	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C 55	ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
	CONNECTOR	
CN 01	SHUNT CONNECTOR, 8P	JC92K08ER001
	IC	
IC 01	IC LA7578N	QSBLA0SSY057
	COILS	
L 02	INDUCTOR 15μH-K-26T or	LLAXKDTKA150
	INDUCTOR 15μH-K-26T	LLAXKATTU150
L 04	INDUCTOR 10μH-K-26T or	LLAXKDTKA100
	INDUCTOR 10μH-K-26T	LLAXKATTU100
L 05	INDUCTOR 39μH-K-26T or	LLAXKDTKA390
	INDUCTOR 39μH-K-26T	LLAXKATTU390
T 02	COIL 2259-JPS-398	LFA05V0SF007
T 03	COIL 2259-JPS-400	LFA05V0SF009
T 04	COIL 2259-JPS-394	LFA05V0SF003
T 05	COIL 2259-JPS-397	LFA05V0SF006
T 06	COIL 2259-JPS-397	LFA05V0SF006
	TRANSISTOR	
Q 01	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
	RESISTORS	
R 01	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 02	CHIP RES. 1/10W J 150 Ω or	RRXAJR6Z0151
	CHIP RES. 1/10W J 150 Ω	134F151C
R 03	CHIP RES. 1/10W J 270 Ω or	RRXAJR6Z0271
	CHIP RES. 1/10W J 270 Ω	134F271C
R 10	CHIP RES. 1/10W J 3.3K Ω or	RRXAJR6Z0332
	CHIP RES. 1/10W J 3.3K Ω	134F332C
R 11	CHIP RES. 1/10W J 6.8K Ω or	RRXAJR6Z0682
	CHIP RES. 1/10W J 6.8K Ω	134F682C
R 12	CHIP RES. 1/10W J 2.7K Ω or	RRXAJR6Z0272
	CHIP RES. 1/10W J 2.7K Ω	134F272C
R 13	CHIP RES. 1/10W J 1.8K Ω or	RRXAJR6Z0182
	CHIP RES. 1/10W J 1.8K Ω	134F182C

Ref. No.	Description	Part No.
R 14	CHIP RES. 1/10W J 1.5K Ω or	RRXAJR6Z0152
	CHIP RES. 1/10W J 1.5K Ω	134F152C
R 15	CHIP RES. 1/10W J 1.2K Ω or	RRXAJR6Z0122
	CHIP RES. 1/10W J 1.2K Ω	134F122C
R 16	CHIP RES. 1/10W J 56K Ω or	RRXAJR6Z0563
	CHIP RES. 1/10W J 56K Ω	134F563C
R 17	CHIP RES. 1/10W J 6.8K Ω or	RRXAJR6Z0682
	CHIP RES. 1/10W J 6.8K Ω	134F682C
R 18	CHIP RES. 1/10W J 2.7K Ω or	RRXAJR6Z0272
	CHIP RES. 1/10W J 2.7K Ω	134F272C
R 19	CHIP RES. 1/10W J 820K Ω or	RRXAJR6Z0824
	CHIP RES. 1/10W J 820K Ω	134F824C
R 21	CHIP RES. 1/10W J 150K Ω or	RRXAJR6Z0154
	CHIP RES. 1/10W J 150K Ω	134F154C
R 22	CHIP RES. 1/10W J 120K Ω or	RRXAJR6Z0124
	CHIP RES. 1/10W J 120K Ω	134F124C
R 23	CHIP RES. 1/10W J 120K Ω or	RRXAJR6Z0124
	CHIP RES. 1/10W J 120K Ω	134F124C
R 24	CHIP RES. 1/10W J 82K Ω or	RRXAJR6Z0823
	CHIP RES. 1/10W J 82K Ω	134F823C
R 27	CHIP RES. 1/10W J 1.5K Ω or	RRXAJR6Z0152
	CHIP RES. 1/10W J 1.5K Ω	134F152C
R 28	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 29	CHIP RES. 1/10W J 360 Ω or	RRXAJR6Z0361
	CHIP RES. 1/10W J 360 Ω	134F361C
R 30	CHIP RES. 1/10W J 150 Ω or	RRXAJR6Z0151
	CHIP RES. 1/10W J 150 Ω	134F151C
R 32	CHIP RES. 1/10W J 3.3K Ω or	RRXAJR6Z0332
	CHIP RES. 1/10W J 3.3K Ω	134F332C
R 34	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 35	CHIP RES. 1/10W J 2.7K Ω or	RRXAJR6Z0272
	CHIP RES. 1/10W J 2.7K Ω	134F272C
R 36	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 37	CHIP RES. 1/10W J 390 Ω or	RRXAJR6Z0391
	CHIP RES. 1/10W J 390 Ω	134F391C
R 38	CHIP RES. 1/10W J 68 Ω or	RRXAJR6Z0680
	CHIP RES. 1/10W J 68 Ω	134F680C
R 40	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 42	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 43	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 44	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 45	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
R 46	CHIP RES. 1/10W 0 Ω or	RRXAZR6Z0000
	CHIP RES. 1/10W J 0 Ω	134F000C
	VARIABLE RESISTOR	
VR 01	CARBON P.O.T. 10K Ω B or	138A959
	CARBON P.O.T. 10K Ω B or	VRCB103KA012
	CARBON P.O.T. 10K Ω B	VRCB103HH002
	MISCELLANEOUS	
2B 16	SHIELD, TOP(IF)	0VM302616
2B 17	SHIELD, BOTTOM(IF)	0VM302617
F 01	SURFACE ACOUSTIC WAVE FILTER F1044QS	FBB386PTS003
F 03	CERAMIC TRAP 5.5MHZ/5.74MHZ	FBE575PMS004
F 04	CERAMIC FILTER 5.5MHZ	FBB555PMR004
	LABEL, IF	0VM407532

DECK MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

Ref. No.	Description	Part No.
B 1	CHASSIS ASSEMBLY REEL SENSOR PRISM	0VSA07743
B 2	CYLINDER ASSEMBLY(PPS) PAL 4HD 2SP	N5108CYL
B 3	LOADING MOTOR PREPARATION MK5	0VSA07425
B 4	MOTOR HOLDER CALKING ASSEMBLY MK5	0VSA07421
B 5	CASSETTE DRIVE LEVER ASSEMBLY MK4	0VSA06819
B 6	PINCH ROLLER ARM ASSEMBLY U6	0VSA05848
B 7	PINCH ARM ASSEMBLY FUNAI	0VSA05924
B 8	PULLEY ASSEMBLY U6 MK2	0VSA05505
B 9	MOVING GUIDE S ASSEMBLY MK4 PLASTIC	0VSA06934
B 10	MOVING GUIDE T ASSEMBLY MK4 PLASTIC	0VSA06935
B 11	LOADING ARM T ASSEMBLY U6 MK2	0VSA05503
B 12	LOADING ARM B ASSEMBLY	0VSA04215
B 13	LOADING ARM M ASSEMBLY or	0VM404693
	LOADING ARM M ASSEMBLY MK3	0VSA07350
B 14	PINCH ROLLER SPRING(U5)	0VM403949C
B 15	LUMIRROR WASHER 3.1X6X0.35	0VM403269
B 21	LOADING BELT U5 or	0VM403432
	LOADING BELT U6MK2	0VM403952
B 22	P.S.W(CUT)	0VM404679
B 27	BAND BRAKE ASSEMBLY	0VSA04658
B 28	MAIN BRAKE S ASSEMBLY	0VSA04212
B 29	MAIN BRAKE T ASSEMBLY	0VSA04213
B 30	T BRAKE ARM ASSEMBLY	0VSA04641
B 31	AC HEAD ASSEMBLY MK4 R/P	0VSA06766
B 32	REEL BASE ASSEMBLY U5	0VSA04759
B 35	TAPE GUIDE ASSEMBLY	0VM402560
B 36	TENSION LEVER SPRING ASSEMBLY	0VSA04550
B 37	CAPSTAN MOTOR F2QKB92 or	MMDDB5ZSJ002
	VA CAPSTAN MOTOR F2QQTB11	MMDZB05SJ001
B 38	MODE CHANGE LEVER MK3 JOGSHUTTLE MK3	0VM100511K
B 39	M BRAKE(S) SPRING	0VM402579A
B 40	M BRAKE(S)LEVER	0VM300753F
B 41	S BREAKE ARM U6/U7	0VM301759
B 42	M BRAKE T ARM SPRING	0VM402582C
B 43	T BRAKE SPRING(2) MK3 JOG	0VM405798
B 45	M LEVER SPRING(3)	0VM406664
B 46	TAPE GUIDE ARM SPRING	0VM402581
B 47	TAPE GUIDE ARM ADJUST SCREW	0VM403242
B 49	BT DRIVE ARM	0VM300756K
B 51	CHANGE ARM or	0VM402441G
	CHANGE ARM A	0VM405857
B 52	CAPSTAN BELT or	0VM402397A
	CAPSTAN BELT	0VM403950B
B 53	P.S.W B	0VM402625
B 54	GROUND BRUSH ASSEMBLY U5 or	0VM404524
	GROUND BRUSH ASSEMBLY U5	0VM404827
B 74	LUMINESCENCE PRISM(B) U6/U7	0VM301764H
B 76	REC ARM SPRING	0VM402578A
B 81	M LEVER HOLDER U6/U7	0VM301717E
B 83	RACK SPRING B	0VM403894A
B 103	REC ARM A	0VM301441J
B 104	REC ARM B	0VM301442I
B 105	REC SPRING	0VM403724
B 108	P.S.W F	0VM402629

Ref. No.	Description	Part No.
B 121	WORM	0VM402429E
B 122	P.S.W C	0VM402626
B 123	P.S.W (WORM THRUST)	0VM403348
B 126	PULLEY U6/U7	0VM301718D
B 127	PULLEY FELT	0VM404952
B 128	KICK ARM HOLDER U6/U7	0VM301716
B 129	PRESS FIT BUSH	0VM403652A
B 130	KICK ARM U6/U7	0VM404382F
B 131	KICK ARM SPRING U6/U7	0VM404424D
B 132	CLUTCH ASSEMBLY U6 MK2	0VSA05509
B 133	ARM IDLER ASSEMBLY U9 4HEAD	0VSA06334
B 141	PULLEY SUB ASSEMBLY U6/U7	0VSA05998
B 142	SHAFT LOCK ASSEMBLY	0VSA04642
B 144	CLUTCH WASHER MK2	0VM404428
B 145	MAIN LEVER ASSEMBLY U9 4HEAD	0VSA06331
B 146	SPRING SUPPORTER	0VM405084A
B 147	STOPPER BOSS	0VM405188
B 148	TG CAP MK4	0VM406153A
B 149	TG CAP(2) MK4	0VM406389B
B 300	FL ASSEMBLY MK4	0VDM06962
B 302	RACK MK3	0VM201456B
B 303	F DOOR OPENER(2) or	0VM302218A
	F DOOR OPENER(3)	0VM302351B
B 304	DOOR OPENER MK3	0VM302019B
B 307	F DOOR OPENER R SPRING MK3	0VM405214E
B 308	SLIDER SHAFT MK3	0VM405222D
B 311	DOOR OPENER SPRING MK3	0VM405302D
B 313	CASSETTE DRIVE GEAR R SPRING MK4	0VM406253
B 316	DOOR LOCK RELEASE ARM SPRING	0VM402508C
B 317	DOOR LOCK RELEASE ARM(3) MK3	0VM405034D
B 319	CASSETTE SPRING STOPPER	0VM402507I
B 326	DRIVE ARM SPRING JOG SHUTTLE MK3	0VM405172C
B 327	BUSH CLUTCH(2) JOG MK3	0VM405368
B 328	REEL DRIVE ARM JOG SHUTTLE MK3	0VM301978E
B 329	HOLDER KICK ARM JOG SHUTTLE MK3 or	0VM301979D
	HOLDER KICK ARM(2) JOG SHUTTLE MK3	0VM302219B
B 330	DRIVE ARM SHAFT JOG SHUTTLE MK3	0VM405170
B 331	DRIVE ARM ROLLER JOG SHUTTLE MK3	0VM405171
B 332	HOLDER ARM SPRING JOG SHUTTLE MK3	0VM405174C
B 334	P.S.W 1.7X3.2X0.5T	0VM403678
B 338	P.S.W CUT MK3(3.1X6X0.25)	0VM405809
B 339	REEL BASE ASSEMBLY U9 4HEAD	0VSA06332
B 344	CASSETTE GUIDE R MK4	0VM000074G
B 345	CASSETTE GUIDE L MK4	0VM100544E
B 346	FRONT GUIDE MK4	0VM201618A
B 347	DECKANGLE F MK4	0VM302263D
B 348	DECKANGLE B MK4	0VM302264D
B 349	MIRROR HOLDER L MK4	0VM302265D
B 350	SLIDER GEAR MK4	0VM406109A
B 351	MIRROR(3)	0VM406638
B 352	CASSETTE DRIVE GEAR MK4	0VM302260E
B 353	CASSETTE PLATE MK4	0VM302261D
B 354	SLIDER R MK4	0VM201616B
B 355	SLIDER L MK4	0VM201617D
B 356	LOCK LEVER MK4	0VM302262F

Ref. No.	Description	Part No.
B 357	LOCK LEVER SPRING MK4	0VM406152
B 358	CAM	0VM100543A
B 359	CLEAN LEVER MK4	0VM302259H
B 360	CLEAN ROLLER MK4	0VM406123
B 361	CLEAN BEARING MK4	0VM406124
B 362	MIRROR HOLDER R MK4	0VM302365B
B 363	GEAR SUPPORTER MK4	0VM406240
B 366	PRISM	0VM406950
B 367	PRISM COVER	0VM406951
B 369	CLUTCH SHAFT CAP	0VM406892
L1011	SCREW, C-TIGHT M3X9 PAN HEAD+	GPMC3090
L1051	SCREW, S-TIGHT M2.6X6 PAN HEAD+ or	GPMS9060
	SCREW(CAPSTAN) M2.6X6 S-TIGHT	0VM405901
L1053	SCREW, S-TIGHT M2.6X6 PAN HEAD+ or	GPMS9060
	SCREW(CAPSTAN) M2.6X6 S-TIGHT	0VM405901
L1061	SCREW, S-TIGHT M2.6X4 PAN HEAD+	GPMS9040
L1062	SCREW, S-TIGHT M2.6X8 PAN HEAD+	GPMS9080
L1081	SCREW, S-TIGHT 3X6 BIND HEAD+	GBMS3060
L1091	SCREW, S-TIGHT M3X6 CUP HEAD+	GCMS3060
L1101	SCREW, P-TIGHT 3X8 BIND +	GBMP3080
L1103	SCREW, P-TIGHT 3X8 BIND +	GBMP3080
L1111	SCREW, P-TIGHT 3X8 WASHER +	GCMP3080
L1112	SCREW, P-TIGHT 3X8 WASHER +	GCMP3080
L1113	SCREW, P-TIGHT 3X8 WASHER +	GCMP3080
L1115	SCREW, P-TIGHT 3X8 WASHER +	GCMP3080
L1151	SCREW, SEMS M3X4 PAN HEAD +	CPM33040
L1191	SCREW, P-TIGHT M2.6X12	GCMP9120
L1221	SCREW,SPECIAL	0VM403688
L1231	SPACER SCREW ASSEMBLY	0VM403752
L1241	SCREW, P-TIGHT M2X6	GBMP2060
L1291	SCREW, P-TIGHT M2.6X6 PAN HEAD+	GPMP9060
L1311	SCREW, B-TIGHT M3X18 PAN HEAD+	GPMB3180
L1321	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
L1331	SCREW, P-TIGHT M2.6X12	GCMP9120
L1341	SCREW, P-TIGHT M2.6X8 BIND +	GBMP9080
L1342	SCREW, P-TIGHT M2.6X8 BIND +	GBMP9080
L1351	SCREW, SEMS M2.6X6	0VM406255A

DECK ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that not assigned part numbers (————) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C..........±0.25% D..........±0.5% F..........±1%
G..........±2% J..........±5% K..........±10%
M..........±20% N..........±30% Z..........+80/-20%

JNT CBA

Ref. No.	Description	Part No.
	JNT CBA (Joint + Mode SW + ACE Head) Consists of the following:	0VSA07380
	Joint CBA (JNT-A)	————
	Mode SW CBA (JNT-B)	————
	ACE Head CBA (JNT-C)	————

Joint CBA (JNT-A)

Ref. No.	Description	Part No.
	Joint CBA (JNT-A)	————
	CONNECTORS	
CN2691	ANGLE SOCKET CONNECTOR, 20P	1770615,
CN2692	FFC CONNECTOR BASE, TOP 9P or	JC2SJ09ERH0C,
	FFC CONNECTOR BASE, TOP 9P or	1700915,
	FFC CONNECTOR BASE, TOP 9P or	1700449,
	FFC CONNECTOR BASE, TOP 9P or	1700515,
	FFC CONNECTOR BASE, TOP 9P	1700986,
	RESISTORS	
R 2691	CARBON RES. 1/4W J 27K OHM or	RCX4JATZ0273,
	CARBON RES. 1/6W J 27K OHM	RCX6JATZ0273,
R 2692	CARBON RES. 1/4W J 27K OHM or	RCX4JATZ0273,
	CARBON RES. 1/6W J 27K OHM	RCX6JATZ0273,
	MISCELLANEOUS	
CL2691	JUMPER WIRE, 5P AWG26#20080/P2.0/50	WX1K7010-003
CL2692	JUMPER WIRE, 6P AWG26#20080/P2.0/90	WX1N5007-001
CL2693	JUMPER WIRE, 3P AWG26#2651/P2.0/80	WX1H5100-001
	FFC CABLE, 9P FFC/P1.25/120	WX3909QZ4413

Mode SW CBA (JNT-B)

Ref. No.	Description	Part No.
	MODE SW CBA (JNT-B)	————
SW2691	MODE SWITCH HMW0420-810010	SSR0104HD002

ACE Head CBA (JNT-C)

Ref. No.	Description	Part No.
	ACE Head CBA (JNT-C)	————
CN2693	FLAT CABLE CONNECTOR 6P or	JEHBJ06JE001
	FLAT CABLE CONNECTOR 6P	JC88J06NB001

PRV CBA

Ref. No.	Description	Part No.
	PRV CBA (Head Amp + FE Head) Consists of the following:	0VSA07381
	Head Amp CBA (PRV-A)	————
	FE Head CBA (PRV-B)	————
	FE Head CBA (PRV-C)	————

Head Amp CBA (PRV-A)

Ref. No.	Description	Part No.
	Head Amp CBA (PRV-A)	————
	CAPACITORS	
C 3801	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3802	ELECTROLYTIC CAP. 100µF/6.3V M H7 or	CE0KMZPSL101
	ELECTROLYTIC CAP. 100µF/6.3V M H7	526R107
C 3803	ELECTROLYTIC CAP. 0.22µF/50V M H7 or	CE1JMZPSLR22
	ELECTROLYTIC CAP. 0.22µF/50V M H7	526W224
C 3804	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3805	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3806	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3807	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3809	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3813	CERAMIC CAP.(AX) SL J 15pF/50V or	CCA1JJTSL150
	CERAMIC CAP. SL J 15pF/50V	3S41150T
C 3821	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JJT0B101
	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JKT0B101
	CERAMIC CAP. B J 100pF/50V or	3B41101T
	CERAMIC CAP. B J 100pF/50V	3B42101T
C 3822	CERAMIC CAP.(AX) SL J 47pF/50V or	CCA1JJTSL470
	CERAMIC CAP.SL J 47pF/50V	3S41470T
	CONNECTORS	
CN3801	ANGLE SOCKET CONNECTOR, 15P	1770612
CN3802	FFC CONNECTOR BASE, SIDE 5P	JC96J05ERC0C
	IC	
IC 3801	IC, VIDEO H-AMP LA7376	QSBLA0SSY035
	COILS	
L 3801	INDUCTOR 22µH-K-26T or	LLAXKDTKA220
	INDUCTOR 22µH-K-26T	LLAXKATTU220
	RESISTORS	
R 3801	CARBON RES. 1/4W J 22K OHM or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K OHM	RCX6JATZ0223
R 3802	CARBON RES. 1/4W J 8.2K OHM or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K OHM	RCX6JATZ0822
R 3803	CARBON RES. 1/4W J 1K OHM or	RCX4JATZ0102
	CARBON RES. 1/6W J 1K OHM	RCX6JATZ0102
R 3804	CARBON RES. 1/4W J 5.6K OHM or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K OHM	RCX6JATZ0562
R 3808	CARBON RES. 1/4W J 33K OHM or	RCX4JATZ0333
	CARBON RES. 1/6W J 33K OHM	RCX6JATZ0333
	MISCELLANEOUS	
2B 2	SHIELD, TOP	0VM302519

2B 3	SHIELD, BOTTOM	0VM302520
CL3801	JUMPER WIRE, 6P AWG26#20080/P2.0/35	WX1K7010-012
CL3802	JUMPER WIRE, 3P AWG26#2651/P2.0/80	WX1H5100-001

FE Head CBA (PRV-B)

Ref. No.	Description	Part No.
	FE Head CBA (PRV-B)	———
B 73	FE HEAD MH-131SF5/KM-1311550 or FE HEAD VTR-1X2ERS11-122 SPACER;FE	DHVEC01LA004 DHVEC01TE003 0VM405209B

FE Head CBA (PRV-C)

Ref. No.	Description	Part No.
	FE Head CBA (PRV-C)	———
B 73	FE HEAD HVFHF0049A SPACER;FE	DHVEC01AL002 0VM405209B